

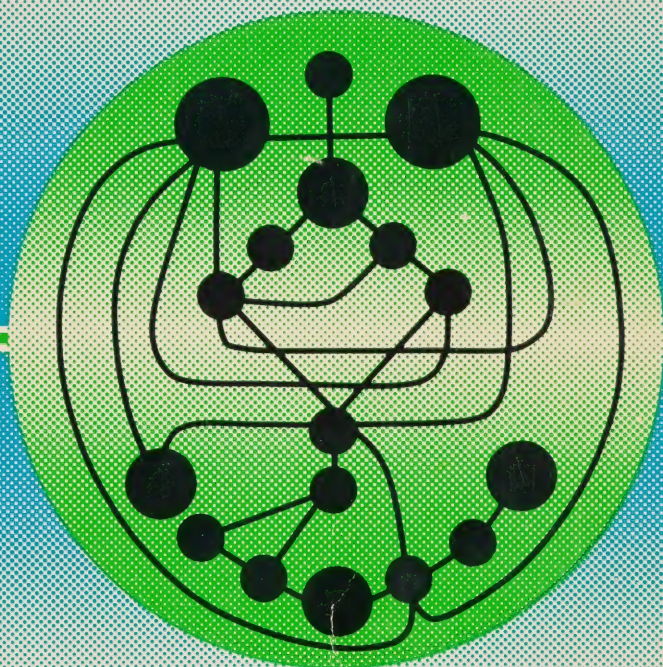
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# URBAN CANADA

## problems and prospects



A report prepared by N. H. Lithwick  
for the Honorable R. K. Andras,  
Minister Responsible for Housing  
Government of Canada

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Canada. ~~Hausen~~, minister responsible for  
Urban Canada: problems and prospects  
Report. 1970



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# Urban Canada: Problems and Prospects

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A REPORT PREPARED BY N. H. LITHWICK  
FOR THE HONOURABLE R. K. ANDRAS  
MINISTER RESPONSIBLE FOR HOUSING  
GOVERNMENT OF CANADA

OTTAWA, 1970

CENTRAL MORTGAGE AND HOUSING CORPORATION  
OTTAWA 7, CANADA

December, 1970



March 9, 1970

The Honourable Robert Andras,  
Minister Responsible for Housing,  
House of Commons,  
OTTAWA, Ontario.

Dear Mr. Andras:

I am herewith transmitting to you a document entitled *Urban Canada: Problems and Prospects* which has been prepared at your request. In line with the terms of reference which you set, this report is a survey of present trends and future projections in urban development. An attempt has been made to write a report which would assist the Federal Government to determine what, if any, role it should play in urban affairs and the likely consequences of such a role.

Three basic criteria were established for the Study:

- (1) that the conceptual basis for understanding urbanism must be as fully and logically articulated as possible;
- (2) that the inquiry was to be empirical—that we would attempt to provide evidence to test the conceptual framework;
- (3) that policy analysis ought to flow logically from the tested conceptualization.

These criteria reflect my conviction that in dealing effectively with a complex social system like the urban, it is necessary to cast aside our simplistic, one-dimensional, casual empiricism, and begin to understand the workings of that system in all its complexity. The organization of the study reflects these criteria. Chapters 1 and 2 constitute my attempt to set out a useful conceptual framework. Chapters 3 and 4 involve an analysis of urban patterns and problems if present trends continue. Chapter 5 explores the

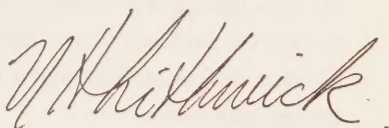
policy arsenal—past, present, and future—for dealing with this urban phenomenon. A number of issues of great significance to the cities have not been dealt with, because of the absence of adequate analysis and evidence at this time. This was particularly so for the questions of social unrest and pollution.

Because the time available to me was limited, and these criteria were extremely demanding, I sought the services of a number of experts across the country, in universities, in the public service and in private consulting work. Their respective contributions consisted of a number of monographs being prepared separately, and are referred to at the relevant points in the text. Their efforts were instrumental in getting this task completed, and the quality of their work speaks for itself.

The efforts of innumerable persons have made the technical task, of getting the document out on time, possible. The herculean task of preparing the entire manuscript fell on one pair of superb hands—my secretary, Mrs. Dorothy Bois—to whom any expression of gratitude would be woefully inadequate. The editing was done by Christine Purden, the design by Phyllis Lee of C.M.H.C., and the artwork was prepared by Norm Hallendy.

Despite these essential aids, the conception, the organization, the editing and the conclusions remain my responsibility. They add up to but one of many possible approaches to the understanding of modern urbanism. If it therefore cannot be expected to provide *the* answer, I sincerely hope that, by insisting on evidence, on logic, and on rational policymaking, it sets a standard for asserting alternatives that will in the end make for a more useful policy framework in this important field.

Respectfully transmitted,

A handwritten signature in dark ink, appearing to read "N. H. Lithwick". The signature is fluid and cursive, with a large, stylized initial "N" and "L".

N. H. Lithwick  
Department of Economics  
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# List of Persons Assisting in the Research Underlying this Study

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HOUSING IN CANADA ( <i>Research Monograph No. 2</i> )	L. Smith*	University of Toronto
	L. Waverman	
	J. Carr	
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	A. Goracz and others	
THE URBAN TRANSPORT PROBLEM ( <i>Research Monograph No. 3</i> )	D. Reynolds*	C.M.H.C.
	T. Parkinson	Canadian Transport Commission
	N. D. Lea and Associates, Toronto	
THE URBAN PUBLIC ECONOMY ( <i>Research Monograph No. 4</i> )	W. I. Gillespie *	Carleton University
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	D. Reynolds	
A SURVEY OF ALTERNATIVE URBAN POLICIES ( <i>Research Monograph No. 6</i> )	L. D. Feldman & Associates, * Toronto	
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# URBAN CANADA: PROBLEMS AND PROSPECTS

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Part I: An Introduction to the problems  
of Urban Canada

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Part I  
AN INTRODUCTION TO THE PROBLEMS OF URBAN CANADA

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# Part I: An Introduction to the Problems of Urban Canada

## A. THE PROBLEM WITH URBAN PROBLEMS

### a) *The Superficial Consensus*

There can be little doubt that the locus of most of our social problems in the future will be the city. Already there is widespread concern over the forgotten urban poor, the alienated young urbanites, the frustrated middle class seeking shelter, the accelerating pollution of the air and water in and around urban communities, the pointless transformation of most of our central cities into mammoth parking lots, and the general unsightliness of the urban landscape.

What is most striking is the degree to which this concern has recently become a national one. This has both fostered, and been stimulated by, a number of major public events. The *Fourth Annual Review* of the Economic Council of Canada (September 1967) contained a sweeping introduction to urban problems and policies in Canada. Three months later, a Federal-Provincial Conference on Housing and Urban Development was held in Ottawa (December 11, 1967). In August 1968, the Federal Government set up a Task Force on Housing and Urban Development under Mr. Paul Hellyer, and its *Report* was presented on January 22, 1969. The Science Council of Canada, in its Report No. 4. *Towards a National Science Policy for Canada* (October 1968) picked up the same theme, and included as two of the four areas for immediate planning of major projects, urban development and transportation. On February 9-12, 1969 the First Canadian Urban Transportation Conference was held in Toronto, sponsored by the Canadian Federation of Mayors and Municipalities. Finally, urban poverty was examined more closely by the Economic Council in its *Fifth Annual Review* (September 1968).

There appears to be a general consensus arising from these activities, and it is that the problems of the urban unit have multiplied and intensified so greatly as to threaten the long-term viability of the city as we know it. Present methods for dealing with these problems have been judged to be inadequate, and comprehensive new approaches have been advocated.

All this interest and excitement is probably to the good. For too long there

has been insufficient awareness that we are a highly urbanized society, and that the city as it has evolved may no longer be adequate as the environment in which an economically and technologically sophisticated society must operate.

Unfortunately, this conviction that we are faced with impending disaster in our cities is not based on adequate evidence. The data, when used, are often of questionable value and relevance. And even if this information reveals serious problems, it provides little basis for understanding their nature and thereby dealing effectively with them. Few of the above-mentioned inquiries conducted or even drew upon meaningful research. Much was borrowed uncritically from other countries, particularly from the United States with its special racial problems and its particularly large urban conglomerates whose problems are quite different from those in even the largest Canadian cities. Finally, few of the grand new designs have any analytical content. They represent a peculiar amalgam of pure fantasy and particular prejudices. Thus, to date the urban crisis is more an article of faith than a well-understood phenomenon. It is the intention of this Report to inquire rather deeper into the meaning, dimensions, and roots of this so-called crisis.

### b) *What Is Urban about an Urban Problem?*

If our first task is to investigate the substance of urban problems, it is necessary at the outset to understand what is meant by an "urban problem". To many, this may appear a ludicrous effort—to them the problems are so obvious that this nit-picking constitutes a diversionary tactic preventing us from getting on with the job. Yet it is precisely because we are not clear about this matter that we have been so unsuccessful in dealing with urban problems. How else can we explain how three levels of government and the vast resources of a wealthy society have failed to make any progress towards solving them? There have been major attempts to meet obvious needs: a substantial flow of resources has been poured into housing, schools, hospitals, transportation improvements, and more recently, into low-income housing and urban renewal. But these policies do not appear to have had any ameliorating effect, and the urban problems grow more serious.

It is useful to examine the two principal issues involved in defining urban problems. The first has to do with the *urban-ness* of the problem, and the second with the question of whose problem it is.

The chief difficulty in understanding the urban nature of these problems lies in the failure to distinguish those problems that happen to occur in cities from those that are part and parcel of the urban process. Most discussion focusses on the former, which we shall call *problems in the city*. From this perspective, stress is laid on urban units because the dominance of urbanites in the total population is now clearly established, and indeed their relative importance is increasing dramatically, particularly in the major metropolitan areas. But the problems are not necessarily urban in nature. Urban poverty in backward regions is a reflection of regional underdevelopment, rather than some unique urban phenomenon. Pollution in a one-industry town is essentially an industrial problem, rather than an urban one. Unemployment and inflation, although obvious in urban areas,

are not genuine urban problems; their roots lie primarily in the degree to which the nation's overall resources are fully utilized, rather than in the nature of the urban system.

This is not to deny the existence of genuinely urban problems—indeed there are many. There are important areas where solutions must come from other levels of public policy than urban policy, however, and this point must not be lost sight of.

Turning to those problems that are genuinely urban in nature—that are central to the urban process—we find that even here there are serious misunderstandings as to their sources and their very nature. As we shall show in Section C of this Part, and more fully in our research monographs, these problems share a unique characteristic: they are highly interdependent.<sup>1</sup> Housing is related to transportation and land use; these affect the urban poor, the quality of the environment, and the fiscal resources of local governments; and these in turn have severe consequences for housing.

This fundamental interdependence has serious implications for a policy approach that deals with each problem in isolation. Housing policy has added to the stock of urban accommodations, but has led to urban sprawl and fiscal squeeze for the municipalities. Transport policies have moved people faster initially, but have led to further sprawl, downtown congestion, pollution, and rapid core deterioration. Despite these interdependencies, we find, in Part III of this Report, that to date there is no serious attempt within levels of government or between them to coordinate policies. The available interdepartmental committees, with the possible exception of the research-oriented ones, are floundering because the complexity of the problem is overwhelming. No department has been found that seriously considers the impact of its policies on the urban system, despite a widespread awareness of the importance of that impact.

Our research in Part II of this Report offers an explanation for this failure to deal effectively with urban problems. We have found that their interdependence results largely from the fact that they are generated by the process of urbanization itself. The growth of large cities leads to competing demands for the one common feature of all cities, scarce urban space, driving core prices upward and households outward. Transportation, pollution, and poverty problems flow from this. Contained within the process of urbanization, then, are the seeds of the majority of the problems found in the city. From this perspective these problems do not just happen to occur within cities—they are fundamental aspects of the growing city. As such, we might call them *problems OF the city* to distinguish them from the simpler *IN the city* problems.

This view of urban problems demands a radically different approach in public policy. Long-term solutions require intervention in the urbanization process itself. This may appear to pose a severe policy problem. Specific urban problems must now be viewed as symptoms and removing them by traditional methods

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<sup>1</sup> Eric Trist refers to this new type of social problem, which emerges from the increasing interconnectedness of the environment clustering formerly isolable problems, as "problem domains". See his paper *Social Aspects of Science Policy*, Paper prepared for the Roundtable on Science and Society, University of Toronto, March 1969.



will not constitute a cure; therefore, our whole policy framework must be reassessed. On the other hand, the key variables required to control the urbanization process may be both easier to manipulate because of their distance from particular individuals and interests, and more effective because of their enormous leverage and scope. The analogy to monetary and fiscal policy readily comes to mind.

If the analysis is correct, policy to deal with urban problems might become substantially more efficient (we explore alternatives in Part III). But this in itself would not constitute "urban policy". By urban policy we mean the pursuit of a carefully defined set of goals. The overriding goals of a society are contained in its national objectives. Traditionally, these include at least freedom, social justice, progress, and national unity and these are ranked in order of importance in different societies according to the desires of their respective members as filtered through the political system.

The urban system in advanced countries evolved largely in response to the pursuit of one of these goals, economic development, which is one dimension of the objective of progress. (This is documented in Part II of this Report.) The urban context for development is made necessary by the demands of modern technology, particularly the requirements of large-scale production and hence mass markets, industrial specialization and hence close inter-industrial linkages, and large and specialized labour and capital resources. Because all these can occur only in large dense centres, cities are the *sine qua non* for industrialization and economic development. There can be little doubt that this goal of material progress has been more or less successfully achieved. In the course of achieving it, however, a number of other social goals appear to have been subverted. Thus, the requirements of modern technology appear to have substantially reduced certain individual freedoms, particularly in terms of work, political action, and fundamental consumption choices, while expanding the capacity to choose within the rules of the game established by our economic system. Specialization has improved the lot of those trained and motivated in the appropriate direction. Others have been less successful, and economic segregation has emerged which has made the achievement of community much more difficult.<sup>2</sup> Similarly, progress has provided enormous economic improvement for the majority of urbanites, but has locked a minority into a situation of relatively hard-core poverty, frustrating our goal of social justice.<sup>3</sup> Even the goal of progress contains contradictory elements. Economic progress has occurred, but the consequential destruction of our environment and the other familiar costs of economic growth—waste, built-in obsolescence, human redundancy, and so forth—must be deducted in measuring overall progress.

We have already stressed that these problem areas are natural outcomes of the urbanization process. In other words, the serious imbalance in achieving our

<sup>2</sup> See Robert Dorfman, "The Functions of the City" in Anthony H. Pascal, ed., *Contributions to the Analysis of Urban Problems*, Rand Workshop on Urban Problems, December 18, 1967—January 12, 1968, August 1968.

<sup>3</sup> For the inherent conflict between economic and general social objectives, see Mancur Olson, Jr., "Economics, Sociology and the Best of all Possible Worlds", *The Public Interest*, No. 12, Summer 1968.



national goals, involving sacrifices of most others for the sake of economic progress, is inherently linked to the evolution of our urban system. This is the central aspect of *problems OF the city* and may well be referred to as *the urban problem*.

The implication is that equilibrium in achieving our national objectives cannot be restored without intervention in the urban system. This imposes upon us the need for an urban policy. The objective of that policy is the active management of our urban environment to better achieve our fundamental national objectives. We must be very clear on these national objectives and the priorities among them. We must learn much more about the urban process, and we must design strategies for using that process to our advantage. The challenge will be to continue to achieve economic progress while moving towards the attainment of other objectives. This means that the momentum of urbanization will have to be sustained, but carefully controlled.

Controlled urbanization is a particularly tall order, for there is little evidence that such effective meta-policy making<sup>4</sup> can be produced. Indeed, it is one of the anomalies of the modern urban-industrial system that in its expansion technological progress is cumulative. Every innovation builds on preceding ones. But there is little progress in the technology of public policy development. Changes do not constitute a process of steady improvement.<sup>5</sup> Rather, each change cancels out much of what preceded it, so that our current policy mechanisms are not much more advanced than those at Confederation! The growing gap between the technology of problem creation and the technology of problem solution is perhaps the best explanation of the failure of public policy for the cities, and it constitutes what we shall refer to as *the urban policy problem*.

### c) *Whose Problems Are They?*

The second set of questions that must be raised concerns the incidence of urban problems. Who are the people that really face these problems, and how representative are they of the majority of urbanites?

In a thoughtful essay, Raymond Vernon examines the question of the decaying inner city. He finds that pressure for revitalization comes not from the poor who seek to escape from it, nor from the middle classes who already have escaped, but from

"... those persons who look upon the central business district as a place where they have to work ... they are leading businessmen, leading bankers, ... those who look on the central business district as an intellectual gathering point ... our intellectuals, our musicians, our principal architects. This is a pretty formidable group that represents the leadership of the community by and large ... they have formulated the problems to meet their own needs—without any intention in the world of disregarding others' needs, but without regard to the fact that their own needs do not constitute the growing problems of the urban area, if you count problems by counting noses."<sup>6</sup>

<sup>4</sup> Y. Dror, *Public Policy Making Re-Examined*, Chandler, 1968.

<sup>5</sup> Robert Heilbroner, "Socialism and the Future", *Commentary*, December 1969.

<sup>6</sup> Raymond Vernon, *The Myth and Reality of Our Urban Problems*, Joint Center for Urban Studies, MIT-Harvard-Stafford Little Lectures of 1961, published 1962, pp. 63-64.

Although this was written a decade ago, and by a scholar deeply involved in the problems of New York City, the relevance for metropolitan Canada is not diminished. Consider the kinds of activities that have been occurring in inner cities in Canada. Urban renewal has attempted to improve the core area, largely by displacing the poor and substituting commercial and artistic establishments in the place of unsightly housing. The massive Centennial subsidies were largely for cultural centres for the urban elite. Even the stress on open space in the core and the periphery, and the great pollution debate have been urged essentially for aesthetic purposes, and largely at the instigation of the elite, as are our high new housing standards and zoning laws.

For this elite, then, the problem of the city is the increasing threat to the environment in which they typically work and play. But this is not the problem of the majority. Indeed, while the middle classes no doubt face urban problems, by and large they have substantially benefitted from urban development. The majority have their bungalows with green space, their cars, and their durables—stereos, televisions, snowmobiles. Their problems are essentially social rather than environmental—decent schools, safe neighbourhoods, better jobs.

For the urban poor, the problems are even more social in nature. The problems of decent housing, of improved employment and educational opportunities, of adequate resources for the unemployable—these are their major concerns.

Because the elite as defined above are the articulate members of society, their problems have dominated the debate on the urban crisis. Thus, urban policies have been oriented to improving the urban environment, rather than improving the lot of urban residents.<sup>7</sup> As a result, there has probably been a substantial redistribution of resources in favour of the elite, aggravating the problem of urban inequity.

In our analysis of urban problems, we shall insist on preserving this dichotomy between environmental and social policies<sup>8</sup> and their distributional implications, largely because, as we have found in Research Monograph No. 1, the distributional problem is probably the most severe of all urban problems.

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<sup>7</sup> Some still argue that social improvement derives from environmental improvement. See Norman Pearson, "The Modern City and Society", *Queen's Quarterly*, 1961.

<sup>8</sup> For a similar view on this dichotomy, see James Q. Wilson, "Urban Problems in Perspective" in James Q. Wilson, ed., *The Metropolitan Enigma*, Harvard University Press, Revised Edition, 1969, Ch. 12.

## B. PROBLEMS IN THE CITY

### a) *A Catalogue of Problems*

A careful reading of the literature suggests that the following are most often cited as the major urban problems:

- { Poverty
- { Housing costs
- { Transportation congestion
- { Environmental decay
- { Social unrest
- Fiscal squeeze

Others are often cited, but they are essentially constituents of the above-mentioned. Thus, urban sprawl is decried by many, but it is really because it supposedly leads to blight or expensive servicing, rather than because it is a problem in itself, that it raises concern. Rotting cores of cities are seen as a crucial problem, but again they represent a mix of blight, poverty, and housing problems. Pollution is the current major concern, but it is usefully seen as one aspect of the destruction of the environment.

No doubt there are others that do not fit neatly into our classification scheme. The reason for excluding them is to allow us to deal with the most significant ones. Hopefully, some of our findings will be relevant for these other less pervasive problems as well.

### b) *Symptoms vs. Causes*

In most analyses of urban problems, there has been a tendency to deal with them as if they were obvious ills for which direct solutions might easily be found. The presence of blight compels us to remove it; the presence of high housing costs urges upon us the need to reduce the most conspicuous elements of cost, land prices; the presence of congestion on our roads leads us to build more roads.

It should hardly surprise us that these problems have not been solved. In

most cases the solutions have aggravated the problems. The removal of blight via urban renewal has led to its spread; the subsidization of land acquisition in the suburbs has led to costly sprawl and further land-cost increments; the building of roads has spread the population further and induced it to drive more cars for more miles.

The greatest difficulty here is that there has never been an adequate diagnosis of urban problems. There is little understanding of their extent, their impact, and primarily, their causes. As a result, policy has amounted to dealing with symptoms, not causes, and the underlying forces continue to generate the problems with increasing severity as the urbanization process accelerates.

### c) *Myth and Reality*

In an attempt to substantiate this claim and to trace out several implications, we review the two currently most stressed problem areas, housing and poverty. In both we find that there has been an inadequate comprehension of the problem. This stems partly from the complexity of the problems themselves, but more important is the failure to realize that the problems are in fact central to the urban process. As a result, they are functionally interdependent components of a highly complex evolving urban system. Attempts to deal with them piecemeal are likely to be ineffective and perverse.

#### (i) HOUSING

Increased concern has been voiced over the failure of the housing market. Rapid increases in the prices of new homes, in rents, and in costs of running older homes have been documented. Some evidence on this is presented in *Table 1*.

Accepting for the moment the assumption that aggregative indexes are relevant, one is tempted to concur in the view that relative prices have turned sharply against housing. The conventional aggregative explanations of this phenomenon are less than satisfactory, however, and require some critical analysis. If price increases were due to excess demand, we would expect to find evidence of growing shortages concurrent with the rise in prices. The data on apartment vacancies are typically referred to and these do indeed show growing tightness in the major urban centres. But the rent index, which is the most relevant measure of price for this category, shows the lowest rate of increase—lower even than the rise in the Consumer Price Index.

As for housing, it is difficult to get a direct measure of changes in excess demand. One useful indicator is the degree of crowding. With shortages, we would expect an increase in crowding as one aspect of the adjustment process. The number of families per dwelling fell during the period, however, from .95 in 1951 to .85 in 1964 and to .84 by 1967.<sup>9</sup> It should be noted that this family measure may not be a wholly appropriate test, because almost all of the increase in demand for new housing has come from the subdivision of family units and

<sup>9</sup> Calculated from M. C. Urquhart and K. Buckley, *Historical Statistics of Canada*, Cambridge University Press, 1965, p. 510; and CMHC, *Canadian Housing Statistics, 1968*, Table 98, p. 70, and internal CMHC stock of dwelling estimates.



*Table 1*  
ELEMENTS IN THE INCREASE IN COST OF ACCOMMODATIONS  
CANADA, 1949-1968

	1960	1964	1965	1966	1967	1968	Per cent Change 1964-68
a) <i>Prices (1949=100)</i>							
Rent Index.....	142.8	145.0	146.0	148.5	153.5	160.3	10.6
Home Ownership							
Index.....	145.0	162.8	169.5	177.0	187.0	200.6	23.2
Property Taxes.	143.4	163.1	169.1	176.8	184.0	196.2	20.3
Mortgage							
Interest.....	109.3	121.3	125.5	130.8	137.2	149.3	23.1
New Bungalows							
Index.....	182.0	204.3	214.1	233.8	239.2	242.8	18.8
Land Cost.....	359.2	428.2	428.6	457.5	480.2	511.0	19.3
Construction							
Cost.....	159.2	173.4	183.5	200.7	205.0	207.4	19.6
Cost per Sq. Ft.	151.0	161.1	168.2	181.5	188.8	198.7	23.3
Consumer Price							
Index.....	128.0	135.4	138.7	143.9	149.0	155.2	14.6
b) <i>Apt. Vacancy Rates</i>							
<i>Large Units*</i>							
Halifax.....		3.4	3.9	3.4	2.5		
Montreal.....		6.6	5.9	4.4	1.2		
Ottawa-Hull...		8.2	8.8	7.1	1.9		
Quebec.....		6.6	6.4	5.1	2.2		
Toronto.....		2.6	1.5	0.9	1.1		
Vancouver.....		4.4	4.0	1.3	1.0		
Winnipeg.....		5.6	4.9	4.1	1.5		
All Metropolitan							
areas**.....		n/a	n/a	4.3	3.7		

\*More than six units.

\*\*All dwellings regardless of size.

SOURCES: a) DBS, *Prices and Price Indexes*, and CMHC, *Canadian Housing Statistics*, 1968 pp. 53 and 76-80, and DBS, *National Accounts*.

b) CMHC, *Background Papers for the Federal-Provincial Conference on Housing and Urban Development*, December 1967, Attachment No. 1.

the emergence of non-family households, resulting largely from the pattern of household choice by young adults.

An alternative measure that is concerned with all households does not change this conclusion. The percentage of crowded households, defined as ones in which there are more than one person per room in the dwelling, fell steadily from 15.4% in 1961 to 11.9% in 1968.<sup>10</sup> Even this measure might not capture one important adjustment to scarcity, which entails the increased use of lower quality space. Once again, the relevant data do not support the hypothesis of great shortage. Measures ranging from hot and cold water to flush toilets and baths show steady and substantial improvement.<sup>11</sup> Indeed, by the 1961 census, only 5.6% of all occupied dwellings were found to be in need of major repair, and in metropolitan areas, the proportion was even lower, 3.4%.<sup>12</sup>

<sup>10</sup> Calculated from DBS, *Household Facilities and Equipment*, 1961-68, Table 1.

<sup>11</sup> CMHC, *Canadian Housing Statistics*, 1968, Table 92, p. 64.

<sup>12</sup> *Ibid.* Table 93, p. 65.

These additional pieces of evidence do not negate the presence of housing problems, but they do suggest that the problems might have been grossly exaggerated. One particular dimension that is not captured by these aggregative measures is the distributional problem, a subject we shall return to following our discussion on poverty.

Attempts to explain the presumed housing crisis have been notoriously one-sided. Invariably the blame is laid on the supply function: the increasing concentration in the house-building industry, the scarcity of land, the backwardness of housing technology, high interest rates and taxes. Indeed, there exists much evidence on all these aspects in Canada. For example, 34 large firms, constituting less than 2% of this regionally segregated industry, built just under one-third of all the new dwelling units financed under National Housing Act loans to builders in 1968.<sup>13</sup> As for land, most indexes show substantial price increases relative to most other commodities.<sup>14</sup> Compared to best practices elsewhere, including modular and industrialized construction, we appear to lag significantly. Finally, the current trend to higher world interest rates and the 11% sales tax on building materials,<sup>15</sup> combined with a rapidly growing demand for publicly supplied urban services,<sup>16</sup> largely financed through the real property tax, have added substantially to the cost of home provision. Not surprisingly, the bulk of the report of the Hellyer task force was devoted to correcting the supply side.

Unfortunately, such moves are not costless; otherwise the approach would be unexceptionable, a pure efficiency gain. The moment resources must be used to influence supply, we must begin to talk about benefits, and this gets us into the whole question of demand—so conveniently ignored in much of the current discussion.

There are two ways to ignore demand: to assume that it is inelastic with respect to price; or to claim that it should be. Either way, all price changes can be blamed on the supply side and the conclusions already outlined can be drawn. The Economic Council and CMHC have employed the first assumption. Their forecasts of housing demand are completely price free. The demand for houses is determined by calculating the number of households, with some minor adjustments for vacancies and replacements. *Table 2* presents the important elements in this approach.

Such an approach to demand is highly questionable. It derives not from consumer preferences and their articulation in the face of a set of relative prices, but from a technocrat's perception of what they ought to have—their *needs*. If

<sup>13</sup> Large builders are those constructing more than 100 units per year. From CMHC, *Canadian Housing Statistics*, 1968, Table 87, p. 62.

<sup>14</sup> With one major qualification, and that is the fact that the indexes typically include serviced and unserviced land. Preliminary inquiry suggests that changes in the mix towards serviced land—usually through new municipal requirements—do bias the index upward substantially.

<sup>15</sup> Implemented by the Federal Government in three stages: June 1963 (4%), April 1964 (4%), and January 1965 (3%). Economic Council of Canada, *Third Annual Review*, November 1966, Chart 4-13, p. 111.

<sup>16</sup> These are Baumol goods typically, since the majority of them are not subject to productivity increase and hence face rapidly rising prices. W. J. Baumol, "Macroeconomics of Unbalanced Growth: The Anatomy of Urban Crisis", *American Economic Review*, LVII, No. 3, June 1967, pp. 415 ff.

*Table 2*  
 SOURCES OF DEMANDS FOR NEW HOUSING, 1951-1966  
 AND ESTIMATES TO 1981

(Annual Averages, in thousands)

<i>Period</i>	<i>Net Family Formation</i>	<i>Net Undoubling</i>	<i>Non-Family Household Formation</i>	<i>Total Net Household Formation</i>	<i>Demand for New Housing*</i>
			<i>Actual</i>		
1951-56	84.6	7.1	12.4	104.1	99.2
1956-61	87.0	10.0	28.6	125.6	132.6
1961-66	77.7	10.3	41.0	129.0	140.6
			<i>Estimates</i>		
1966-71	113.0	10.0	50.0	173.0	195.6
1971-76	130.1	10.0	56.0	196.1	225.6
1976-81	146.9	10.0	60.0	216.9	255.5

\*Includes replacement demands and vacancy requirements.

SOURCE: CMHC, *Background Papers*, *op. cit.*

prices of houses were to go up, it is hardly reasonable to assume that the same number of units would be demanded—there would necessarily be some elasticity to the demand curve. Thus, to be useful, these forecasts require a projection of different quantities for each set of housing prices, a forecast of supply, and then an equilibrium price-quantity configuration. Independent of price, these measures of “demand” are quite meaningless and possibly misleading.

The alternative concept of demand is that it should be inelastic because of the belief that housing is a right—the view of the Hellyer task force.<sup>17</sup> This concept is essentially a philosophical one; the economic sources of such basic rights are impossible to determine. The economic *consequences*, however, are less difficult to deal with. Once again the question of supply comes to the fore, and the role of the marketplace is to supply these basic requirements as cheaply as possible. Market failures are necessarily blamed on supply and its determinants, and policies are hence supply-oriented: reduce speculation in land, promote technological progress in construction, reduce high taxes and financing costs. And it is just such recommendations that occupy the entire report of the task force.

When the two issues—inelasticity and housing as a right—are built into public policy, some serious consequences follow. But first, let us consider the evidence on elasticity. Chung has found that over time the price elasticity of demand for the housing stock is about  $-1.0$ .<sup>18</sup> His estimating procedures create some difficulties in the acceptability of this figure because of an adjustment for bias: his initial estimate was  $-0.35$  which, though less, gives little grounds for accepting the zero elasticity assumption.

With some further information, a related point emerges. Oksanen has found that for roughly the same period the income elasticity of demand (stock) is  $0.5$ .<sup>19</sup>

<sup>17</sup> “Every Canadian should be entitled to clean, warm shelter as a matter of basic human right.” Task Force on Housing and Urban Development, *Report*, January 1969, p. 22.

<sup>18</sup> J. Chung, “L’analyse de la demande de logements-propriétaires: l’expérience canadienne”, *Actualité Économique*, Avril-Juin 1967.

<sup>19</sup> E. H. Oksanen, “Housing Demand in Canada, 1947 to 1962: Some Preliminary Experimentation”, *Canadian Journal of Economics and Political Science*, XXXII, No. 3, August 1966.



Winnick's analysis shows that it is possible to conclude that there has been a shift of preferences by consumers away from housing if the income elasticity is greater than that for price. He finds that for the United States, such was the case over a long period of time.<sup>20</sup> The Canadian estimates are not sophisticated enough to draw such a conclusion, but the debate is highly suggestive.

It may well be that there has been a change in the tastes of Canadians away from houses and towards other goods and services. For example, between 1961 and 1966, despite similar trends in unit prices, the volume of new cars sold increased by 55% as compared to 40% for housing, so that by 1966 the total outlay on new cars was absolutely greater than that for new dwellings.<sup>21</sup> To the extent that these data are indicative of a change in tastes, failure to deal adequately with the demand side is bound to lead to serious policy errors. Related to this question is the changing nature of the commodity being sought, and this is explained largely by demographic and social factors. Thus, the growing number of elderly people and of independent young people no doubt contributes to the shift in demand away from houses as such to multiple-unit dwellings. From constituting one-seventh of all new dwelling units built in 1949, multiple-unit dwellings are now more than half.<sup>22</sup> This increase can be explained partly by the relatively greater increase in price of single units,<sup>23</sup> although the sharp divergence in price trends has been apparent only recently. When we realize that this shift took place in the face of concerted efforts by the public sector, and particularly CMHC, to promote the purchase and construction of single detached homes almost exclusively, the sources of the housing problem become rather clearer.<sup>24</sup> Rather than being faced with a clearly demonstrated taste for detached housing, the public sector promoted that taste and probably induced thereby an increase in the total demand for accommodation. Furthermore, that specific form of accommodation is extremely costly in social terms, raising very substantially the demand for scarce urban land, tying up larger quantities of capital per unit of dwelling, and compounding other urban problems. The housing crisis, then, is in large part a result of misguided public policy designed to cope with an issue that was only partially understood.

Thus far we have not come to grips with the question of *needs*, or housing as a "right". If society judges this to be a valid use of its collective resources in the light of full knowledge, then there is little one can do but indicate the costs and the possible allocational effects, including the impact of expanded social demand on price. There is certainly less than full knowledge on this issue, so the case remains tenuous. Furthermore, there is a tendency to confuse demand, and even need, with *wants*. It is judged that, because everyone wants a home, this

20 L. Winnick, "Housing: has there been a downward shift in consumers' preferences", in W.L.C. Wheaton, G. Milgram, and M. E. Meyerson, *Urban Housing*, The Free Press, New York, 1966, pp. 154 ff. and subsequent criticism by Jack Guttentag, pp. 162 ff.

21 DBS, *Canadian Statistical Review*, and CMHC, *Canadian Housing Statistics*, 1967, Tables 1 and 15.

22 CMHC, *Canadian Housing Statistics*, 1968, Table 7, p. 7.

23 See Table 1, page 21.

24 CMHC, *Canadian Housing Statistics*, 1968, Table 14, p. 14. In 1960, publicly financed housing was 4:1 for single detached units, compared to 4:3 for privately financed. Only in 1968 was the emphasis on such units reversed.

constitutes a need. But this unanimity is neither surprising nor very useful. Wants differ from demands because they are unconstrained by income and price limitations. In addition, they are private, and hence provide no compelling reason to be accepted as needs. This three-fold confusion has plagued rational analysis of the housing market, and possibly it serves to explain the strong preference for neglecting the demand side altogether, although at great cost in terms of useful policy making.

## (ii) URBAN POVERTY

The second important area over which great concern has been voiced, particularly by the Economic Council of Canada, is the whole question of poverty. The ECC found that three-fifths of all low-income non-farm families lived in urban areas in 1961, and 60% of these were in metropolitan areas. But the incidence of poverty was lowest in the largest cities, and indeed this group of urban poor amounted to less than 9% of all non-farm families in Canada.<sup>25</sup>

This evidence suggests that the magnitude of the problem of urban poverty is less than has been commonly believed—large cities tend to be middle class. And more recent survey findings suggest that there has been a steady decline in the proportion of non-farm families classified as poor, from 26% in 1961 to under 20% in 1965.<sup>26</sup>

But the finding that poverty is declining, and is relatively less prevalent in major urban areas, does not alleviate the problems of the poor. Unfortunately, the ECC made no systematic attempt to cross-classify the data collected on the poor, with the exception of educational attainment, so that it is impossible even to describe the situation of the poor located in large urban centres.<sup>27</sup> As a result, most of the Council's generalizations about the characteristics of the poor are not very relevant for our purposes.

Our own findings (see Research Monograph No. 1) suggest that the prevalent view of the urban poor is excessively narrow and has led to misguided policy recommendations. We find that the urban poor are generally elderly individuals and persons who are otherwise unemployable. The unemployed and the under-employed constitute a very small proportion of the urban poor. Thus, the stress on job-retraining and manpower policies as a cure for urban poverty is inappropriate. They will no doubt assist some of the urban poor, but they can do little for the overall poverty problem.

It is not necessary to present in detail the analyses contained in Research Monographs Nos. 1 and 2. The point is that, to date, we have understood very little of the problems for which we have proposed solutions. The images of the problems that have arisen are based largely on myth and presumption, and until these are destroyed, urban policy is destined to be irrelevant.

<sup>25</sup> Economic Council of Canada, *Fifth Annual Review*, 1968, Table 6-3, p. 111. Data are from Jenny R. Podoluk, *Incomes of Canadians*, 1961 Census Monograph, DBS, Ottawa, 1968.

<sup>26</sup> Gail Oja, "Problems of Defining Low Economic Status for Poverty Studies", *Canadian Statistical Review*, September 1968, p. iii. The poverty line has been adjusted to account for price changes.

<sup>27</sup> The evidence on education is suggestive: while less well educated than the urban rich, the urban poor are substantially better educated than the rural non-farm. *Ibid.*, Chart 6-3, p. 118.

## C. PROBLEMS OF THE CITY

### a) *The Interdependence of Urban Problems*

In the preceding section, several key urban problems were examined largely from a public policy perspective. The failure of public policy in dealing with the problems of housing and poverty was shown to be in part due to an inadequate perception of the issues involved. Thus, the demand for housing has been neglected, and the sources of poverty and the needs of the poor are not really known. Consequently, policy has been based on a collection of myths, largely untested, and usually wrong when more carefully examined. Indeed, much public policy has tended to aggravate these problem areas: housing has been a major contra-cyclical activity with potentially great distributional effects; slums have been seen as a problem of ugliness, the elimination of which has been extremely costly for the urban poor.

These perception and policy failures are not restricted to the areas discussed. In the field of transportation, for example, the problem has always been viewed as one of moving the extant population more efficiently. Rarely have innovations proven to be successful, however, for their introduction has induced changes that are ultimately self-defeating. The public economy of the city has been almost entirely financed from a very weak tax base. Real estate is but one component of property, and property itself is a poor measure of ability to pay, and even of benefit from urban goods. Yet the property tax is the sole direct source of revenue of municipalities. Grants from provinces have kept these economies functioning, but the provinces do not have the most elastic revenue sources—the personal and corporate income taxes which are largely federal. Thus, a poor tax base and fiscal squeeze impose efficiency and distributional costs on the urban community that other levels of government have not adequately alleviated.

Even if each of these problems were dealt with correctly, however, it is not clear that they would be solved. They are so interdependent that the effect of each on the others is more important than the mechanisms internal to any one



in isolation. It is useful to examine this interdependence between the two problems discussed above—poverty and housing—to illustrate this hypothesis. One important area where they converge is in the question of slums. Once again, the general explanation of the emergence of slums relies largely on supply factors. Slums emerge because of an inadequate supply of housing. In the face of scarcity, the poor are least capable of competing in the open marketplace and are thus forced to crowd into inferior dwellings, adding to their deterioration.

As we shall argue later, this supposition neglects the central urban process which is instrumental in creating slums downtown where the poor are typically housed (Chart 1). It also neglects the important question of demand. Given low incomes, the poor cannot afford other than inferior housing. Their problem may largely be one of inadequate income—i.e., poverty—rather than a housing problem *per se*.<sup>28</sup> Attempts to solve the more basic problem by dealing with its symptom may be highly inefficient and indeed inappropriate.

Consider the action taken previously to eliminate urban slums. It was felt that if enough houses were built, the better off would move into newer units leaving an adequate supply to “trickle down” to the poor. It is generally conceded that this scheme was ineffective. The richer merely used more space and nothing to note trickled down. It was then felt that all that was needed was a push at the bottom. If slums were removed, the poor would have to improve their accommodations. This artificially created scarcity made matters worse; slums merely spread, and the poor were exported where spreading was resisted.

The third solution, public housing, also is questionable, because it identifies the poor by a most obvious symbol. Not surprisingly, it is resisted by some poor and most wealthier surrounding neighbours. Not once has there been a concerted attempt to deal with the demand side, despite the evidence that supply policies have not solved this persistent problem.

The issues of housing and poverty converge also in the general inability of a growing segment of the population to afford accommodation.

“This housing market of relatively short supply and relatively high cost has made the quest for adequate accommodation a major problem for more than the lowest income groups. They have a problem, to be sure, but so do those in the next income brackets, the ‘average’ wage earners of the \$5,000 to \$7,500 range . . . the home ownership dream of many Canadians is just that—a dream. Instead they are left to scramble in the rental market to obtain accommodation, *much of it ill-suited for family living*. . . . This is the group who, in many urban centres are increasingly earning the designation of the ‘affluent’ poor.”<sup>29</sup>

It is not possible to trace accurately the relative movements of housing prices for various income groups. But for the period 1961-1965 some crude estimates can be derived.<sup>30</sup> For the lowest third of the income distribution,<sup>31</sup> family in-

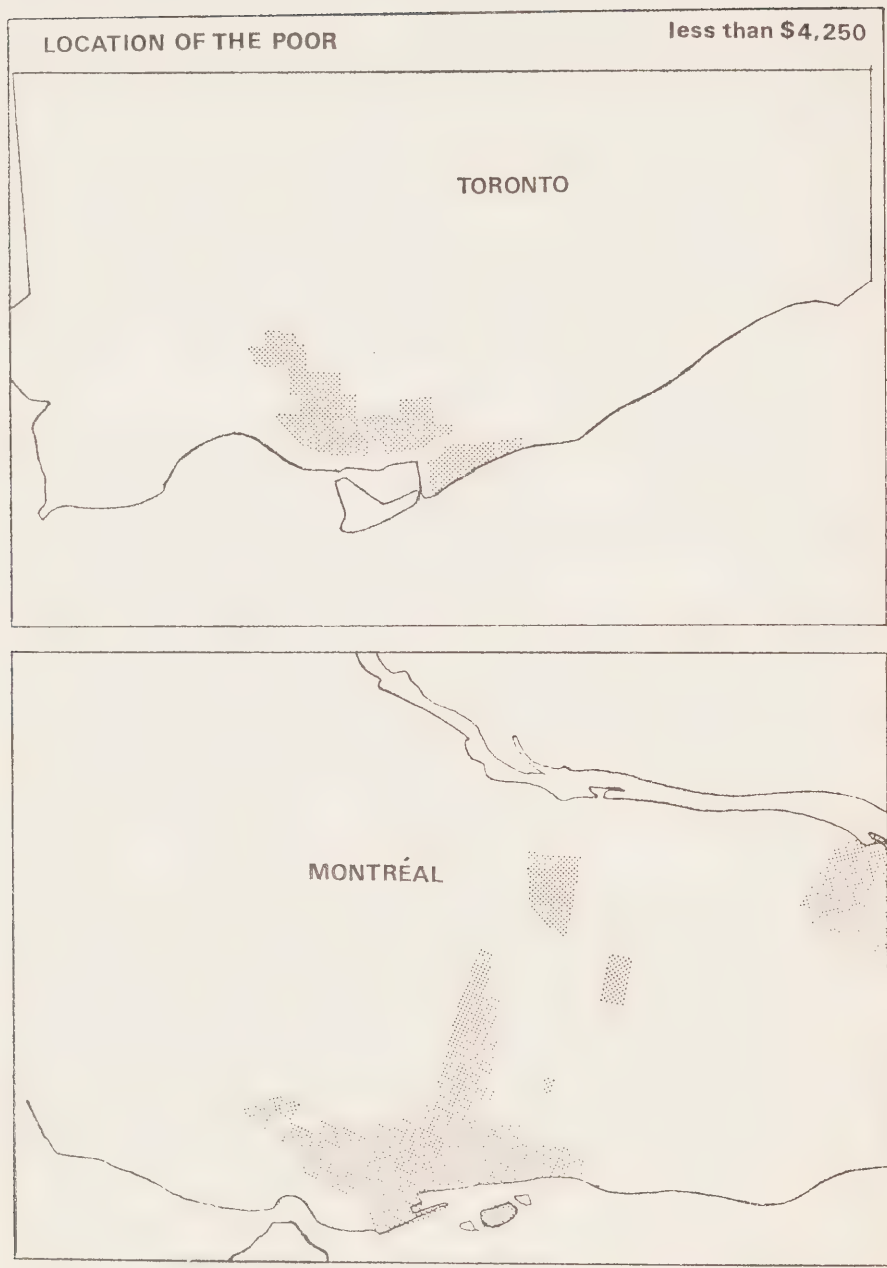
<sup>28</sup> This is confirmed in a recent study by Richard F. Muth, *Cities and Housing*, U. of Chicago Press, 1969, esp. p. 362.

<sup>29</sup> Task Force on Housing and Urban Development, *Report*, op. cit., p. 15. (Emphasis mine, N.H.L.).

<sup>30</sup> Income data supplied by Gad Oja, DBS. Housing costs from CMHC, *Canadian Housing Statistics*, 1968, Table 56, p. 44 and Table 66, p. 50.

<sup>31</sup> In 1961, they were found in the \$0-4,000 income bracket, and in 1965, \$0-5,000.

Chart I



SOURCES: 1961 Census of Canada; DBS, *Population and Housing Characteristics by Census Tracts*, 1963. Montreal Catalogue No. 95-519. Toronto Catalogue No. 95-530.

come rose by 25% over this period while the price of homes they typically purchased rose by 35%. The next 50% of the income distribution<sup>32</sup> had an income increase of 25%, with the price of homes they tended to buy rising by only 18%. It would appear that in this period, the poor were indeed made worse off by the trend in housing prices. In addition, although our crowding indexes suggest no increase in scarcity in the aggregate, the absolute position of the poor regarding housing might have deteriorated with improvements by the majority explaining the satisfactory national averages. Certainly the position of the "affluent poor" does not appear to have deteriorated in this brief period. Over a longer period, 1961-1968, again the increase in the cost of housing for the lowest end of the income distribution far exceeded that of the middle groups.<sup>33</sup> Thus, our admittedly weak evidence does not tend to support the theory of middle class immiserization regarding housing. Better longitudinal data would permit us to deal with this question more adequately, but in terms of overall priorities this problem appears to be less severe than claimed by the Hellyer task force.<sup>34</sup>

It would appear, on the basis of the above evidence, that the central feature of urban problems is indeed their interdependence. Because each problem is itself so complex, and the interdependencies are so variegated, it is difficult to measure the precise relationships between them. Despite this, it is useful to illustrate this interdependence and to assign some weights, based on our analysis, to the degree of that interdependence.

In Figure 1, we have triangulated this matrix, so as to indicate the hierarchy of interdependent problem areas on the basis of implicit weights.

It is of interest that there are only six zero cells in the 30 possible, and that there is major interdependence in 16 of the 30. The weakest problem area in terms of interdependence is environmental destruction; the greatest are the public economy problem and poverty, followed by housing.

It should be added that the system is recursive: a poverty problem aggravates the housing problem, which in turn augments the poverty problem, both directly and indirectly via transport and the public economy. This means that the links are highly complex and diverse, and that the ramifications of an urban problem are substantially wider than simple bilateral examination would tend to suggest.<sup>35</sup>

<sup>32</sup> In 1961, they covered the \$4-8,000 bracket, and in 1965, \$5-10,000. These are presumably the "affluent poor" in the quotation referred to.

<sup>33</sup> CMHC, *Canadian Housing Statistics*, 1968.

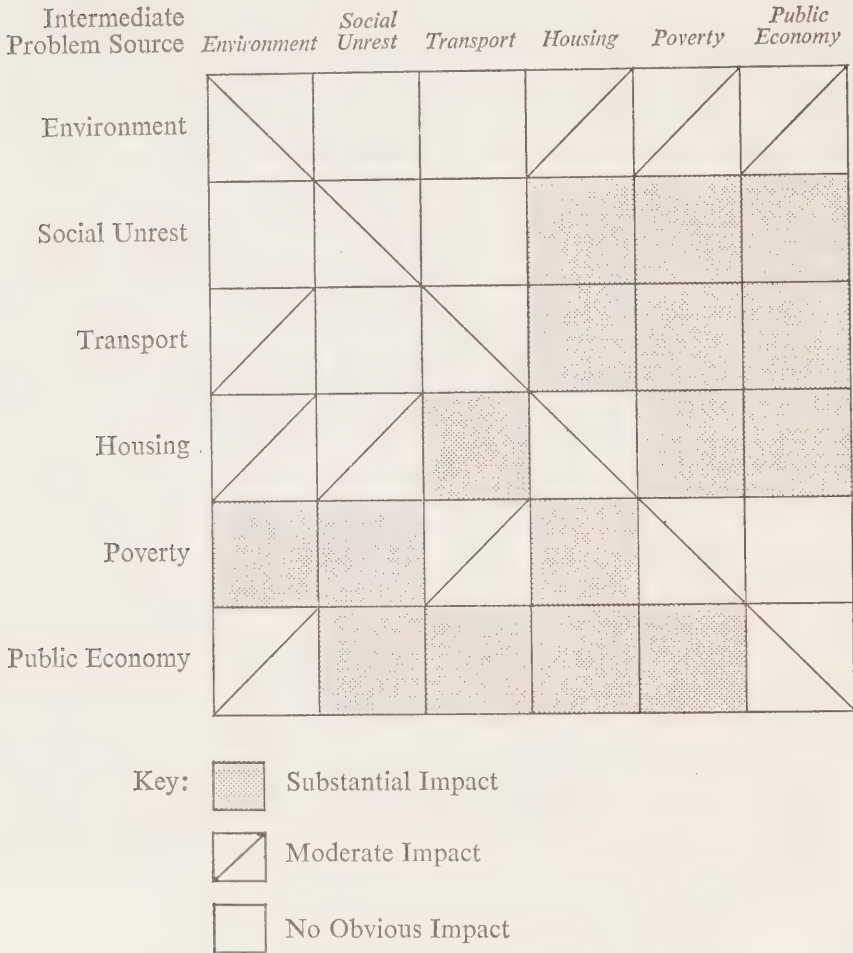
<sup>34</sup> It is true that all groups faced a very tight housing market after 1966, when housing starts fell to 134,000 from 167,000 the preceding year, and most of this decline was in urban centres. However, this is attributable to the tight monetary policy being pursued at the time. This shows up in the sharp rise in the interest rate on conventional mortgages from 6.9% in 1965 to 8.8% in 1968, and the increase in downpayments required. (*Ibid.*, Table 1, p. 1, and Table 53, p. 41.) This cyclical phenomenon is well known, yet the confusion over cyclical and secular patterns continues to plague much of the public discussions on housing. By 1968, housing starts were up to 197,000 and for 1969, the evidence suggests the 200,000 mark was easily surpassed.

<sup>35</sup> This interdependence is used to indicate the possible perverse effects of simple-minded policy making in a study by Jay W. Forrester, *Urban Dynamics*, MIT Press, Cambridge, 1969.



*Figure 1*

## HIERARCHY OF INTERDEPENDENCE OF URBAN PROBLEMS

*Intermediate Problem Impact**b) The Sources of Urban Problems*

The evidence cited strongly suggests that urban problems are so intermeshed that they are indeed part and parcel of a total process that we have referred to as the urban process. This imposes upon us the need to understand that process more fully if we genuinely seek to deal effectively with these urban problems. Most useful in this connection is a dynamic approach based on the development of the urban system.

More than most systems, the urban network is dependent on its past development. The vast amounts of capital tied up in infra-structure in transit links and in private fixed investments dictate that changes are severely constrained. Thus the pattern as well as the location of most cities today is in large part a result of these historical developments. We intend to analyze only one dimension of these developments, the emergence of an urban economy. Because the analysis is limited to economic variables, the explanatory power must remain incomplete; geography, politics, social structure, and accident all contribute to the emergence and functioning of Canadian cities. Nevertheless, the model we intend to develop is able to provide additional insights into the process of urbanization and the emergence of urban problems. The full articulation of the model is presented in Part II of this Report. Here, we merely summarize the process.

Early Canadian towns emerged typically as Central Places,<sup>36</sup> providing the predominantly rural export-oriented economy with goods and services. As such, they were little more than collection depots, and a view of such urban units as essentially spaceless would be fairly accurate.

In the course of economic development in this country, the technical linkages established by our successive staple exports were increasingly located in certain key urban nodes.<sup>37</sup> This was due not only to location advantages, particularly in the case of port cities such as Montreal and later Vancouver, but also to the fact that important inter-industrial linkages could be established in these units. On the production side, the city provides a maximum degree of potential complementarity between industries. The role of final demand is also relevant here, for as incomes rose with successful staple exploitation, tastes shifted towards non-agricultural goods of the sort that—because of the aforementioned economies—are produced in cities. As a result, both supply mechanisms and demand pressures ensured the increasing relative importance of urban units, particularly as import replacement became feasible.

This process tended to become increasingly self-sustaining. As demands for urban goods grew, the compensation of labour in the urban unit grew apace, attracting labour and hence urban population. The expanded scope of production permitted increasing specialization and hence greater productivity, higher incomes, and so on.

The expansion of varieties as well as quantities of job opportunities together with an increasing spectrum of goods and services for consumption made the city irresistible to the rural population, more specifically to the young. Migration of the rural population to the city swelled the size of the urban labour force, kept wages relatively low, and induced further economic expansion in the city.<sup>38</sup>

Only a limited number of nodes could grow to become major urban units—

<sup>36</sup> For a brief review of Central Place Theory, the gem of theoretical geography, see D. Michael Ray, "Urban Growth and the Concept of Functional Region", in N. H. Luttwick and G. Paquet, eds., *Urban Studies: A Canadian Perspective*, Methuen, Toronto, 1968, Ch. 3, pp. 46-54.

<sup>37</sup> See M. H. Watkins, "A Staple Theory of Economic Growth", in W. T. Easterbrook and M. H. Watkins, *Approaches to Canadian Economic History*, Carleton Library No. 31, McClelland and Stewart, Toronto, 1967.

<sup>38</sup> In this view, urbanization is the necessary institutional form for development based on cheap labour of the sort analyzed by W. Arthur Lewis, "Economic Development with Unlimited Supplies of Labour", *The Manchester School*, May 1954.

economies of scale and transportation costs ensured that. Such factors as location, political vigour, and often good luck determined which ones would be favoured. Within these, increased functional differentiation laid the basis for self-sustaining growth.<sup>39</sup>

This view of the urban unit, as inextricably linked to the process of economic development, provides the first insight into the nature of modern cities as economically sophisticated production and consumption centres. Second, the particular mix of economic activity can be related to the spatial arrangements within the city. For an understanding of this combination of factors, a relatively simple but generally neglected aspect of urbanization must be taken into account. Early cities, as we have seen, were viewed as essentially spaceless. They were small units using small quantities of land relative to their hinterland. The large modern city cannot be so viewed. Increasing volumes of economic activity require increasing quantities of land as a direct input. Furthermore, the growing labour force requires land as part of its own housing input. This increasing demand for land conflicts with the limited supply that characterizes the urban unit.

Without transport costs, this problem would be non-existent—the supply of land would almost be infinitely elastic. But with present technology distance does impose costs, and each land user is compelled to trade off distance against the quantity of land desired to minimize costs.<sup>40</sup> Thus, we would expect that market-oriented activities, such as retail trade and services, will be found near the Central Business District, while manufacturing and wholesale trade would be more typically located towards the urban fringe. Evidence by Loewenstein for the United States confirms these hypotheses,<sup>41</sup> although no comparable Canadian evidence exists.

We thus have two mechanisms to explain the growth and pattern of cities: one is macro-dynamic, relating urbanization to economic development; the other is micro-static, allocating economic activities within the urban unit. The analytical device that can be used to relate them is the input-output table, where each activity is assigned locational and land using coefficients. No empirical work on this issue has as yet been produced, but the barriers are imposed largely by lack of data rather than by the theory. Thus, the analysis that follows is still in the form of hypotheses that remain to be proven, although casual observation suggests that they are valid.

How do these two mechanisms generate the urban problem? First, we have an economy that is undergoing rapid economic development. For reasons already cited, this takes place increasingly in an urban environment, and relatively more in large urban units. Evidence is available for the key economic and demographic variables, and some of the data are contained in the following table.

<sup>39</sup> In more technical terms, the off-diagonal elements in the urban input-output table became increasingly filled in. See W. Leontief, "The Structure of Development", *Scientific American*, Vol. 209, No. 3, September 1963, p. 148.

<sup>40</sup> This process is more fully developed in N. H. Lithwick and G. Paquet, *op. cit.*, Ch. 5.

<sup>41</sup> L. K. Loewenstein, *The Location of Residences and Work Places in Urban Areas*, Scarecrow Press, 1965.

Table 3

## LARGE CITY POPULATION GROWTH IN CANADA, 1871-1961

	1871	1901	1921	1941	1951	1961
a) No. of Urban Complexes						
100,000 and over.....	1	2	7	8	15	18
30,000 - 99,999.....	2	8	11	19	20	25
5,000 - 30,000.....	16	43	70	85	102	147
over 5,000.....	19	53	88	112	137	190
b) Per cent of Population						
Urban.....	18.3%	34.9%	47.4%	55.7%	62.4%	69.7%
Per cent of Population in PRMD's**.....	n/a	26.0%	35.4%	40.2%	43.3%	48.3%
c) Increase of population over previous decade						MA*
100,000 and over.....	n/a	n/a	32.2%	9.8%	14.2%	28.2% 45.4%
30,000 - 99,999.....	n/a	n/a	27.0%	12.2%	33.2%	33.3% 37.4%
over 5,000.....	n/a	n/a	31.8%	12.0%	18.7%	28.5% 30.9%

\*Including Metropolitan Area Fringes.

\*\*Principal Regions of Metropolitan Development.

SOURCES: L. O. Stone, *Urban Development in Canada*, DBS, 1961 Census Monograph, Ottawa, 1967.

a) Table 4.2, p. 72.

b) Table 2.2, p. 29.

c) Table 6.2, p. 132.

It can be seen that the largest centres, including their suburban fringes, underwent the most rapid increases in population in the past. This trend will continue so that by the end of this century, well over one-half of all Canadians will be living in the 12 largest metropolitan areas. The implications in growth terms are even more impressive. Of the 16 million persons added to our population by that time, 11.5 million or three-quarters of this increment will be located in these 12 centres. The largest centres will be affected most: Montreal and Toronto alone will accommodate more than half (6.5 million) of all this metropolitan growth, together accounting for one-third of the entire Canadian population by the end of the century.<sup>42</sup>

The concentration of economic activity in these centres further accentuates their dominance. By 1966, Montreal and Toronto accounted for over one-third of all employment in Canadian manufacturing, wholesale trade, and finance.<sup>43</sup> In addition, 60% of all Canadian taxpayers resided in those cities in 1963.<sup>44</sup>

As for family incomes, in large centres they are more than 50% higher than in rural areas, and 30% higher than small urban centres,<sup>45</sup> so that the economic weight of the large cities is much greater than their simple demographic weight. Thus, the growth of Canadian cities in terms of economic activity and popula-

<sup>42</sup> See Part III of this Report.<sup>43</sup> W. G. Gray, M. Jalaluddin, and F. Charbonneau, *A Tale of Two Cities: Economic Growth and Change in Toronto and Montreal*, Economics Division, Policy and Planning Branch (ARDA), August-December 1968, p. 2.<sup>44</sup> *Ibid.*, p. 3.<sup>45</sup> Jenny Podoluk reports the following estimates of average family income in 1961 by urban type.

Metropolitan Areas	\$6,442
Urban Centres: 30,000-99,999	5,848
10,000-29,999	5,477
1,000- 9,999	5,073
Rural	4,247

Op. cit., Table 7.18, p. 174.



tion has been not only an important source of our rapid economic development,<sup>46</sup> but a major consequence as well.

This rapid growth leads to a rapidly expanding demand for urban space. Given the fixed supply of urban land, price is driven up as fast as these demands rise. This increase in price leads to the exclusion of certain users with lower demands, occasioned by lower incomes or acceptable alternatives, from particular sub-markets. As they move into other sub-markets, prices there are forced up and the process continues to rebound throughout the urban system. Thus, the urban unit is the locus of a continuing struggle to acquire increasingly scarce land, and it is this struggle that underlies many urban problems.

Consider first our housing problems. To the extent that urbanization makes sound economic sense because of consumption and production gains, we will expect an increasing level of demand for urban space. If to this we add the taste, manufactured by public policy or not, for land-intensive single detached dwellings, the demand will increase even more, and in the face of scarce urban land, prices will soar, as we noted in *Table 1*. But this will induce the population to seek land more remote from the Central Business District, as distance is traded off against more land. This is the source of the pressure for suburbanization. But moving farther out imposes increased travel costs, directly through greater distances and indirectly through the opportunity cost of time spent not working. Given a fixed transit system, congestion also is increased, and as a result private and public pressures for more and faster systems increase. As new systems are installed, however, driving down travel costs, land farther out becomes more accessible and further suburbanization takes place, increasing demand on the system as more automobiles per family are required. This solution might not end the vicious circle but it could at least prevent deterioration, except for one difficulty: the inability to expand the transportation system at all points. The greatest demands occur in the core, both in flow requirements and in storage needs, yet it is there that land prices are highest, streets are narrowest, and alternative uses with large fixed investments already exist. This dramatically increases the cost of any transportation improvement in that area; yet without it, congestion is inevitable. With concentration and congestion come pollution, noise, and general environmental decay.

Here the dilemma of problem interdependence is starkly revealed. "Curing" the transit problem without regard to the locational choice of households is self-defeating, and housing policy without an eye to transit systems is as unpromising. Yet housing policy is conducted to this day as if the transit problem were non-existent, and engineers design better transit systems, blissfully ignorant of the long-term impact on housing and urban structure. Both problems have their root in the growth and structure of cities, and are not amenable to partial solutions.

<sup>46</sup> It is true that beyond some size cities may become dysfunctional and actually retard future growth; it is claimed that New York and Los Angeles are beyond that point. There is little accurate evidence for the claim, and even less grounds for believing that the major Canadian cities—Montreal and Toronto—have surpassed this level, although by 2001 they will be in the same size league.

Most problematical, but strongly related to the central process of urbanization, is the question of urban poverty. The characteristics of the phenomenon are familiar: slum housing near the core, endemic unemployment, high crime rates, disadvantaged children, and so forth. The role of urbanization in this area is less clear and requires some elaboration. Families with low incomes have limited locational choices. Despite the high cost of land downtown, compensation can be made through crowding. The alternative of suburban living is just not possible, because for most low-income families the essential transit mode, the automobile, is inaccessible. Thus, in the absence of a low-cost rapid transit system, these persons are forced into the fringes of the downtown area. Crowding invariably leads to a deterioration in the quality of the housing stock, and slums emerge. Similarly, employment opportunities in the core are typically for semi-skilled and clerical workers. Indeed, perhaps the most drastic change in the economy of the downtown area in the past was occasioned by the move of manufacturing to the suburbs as technology introduced single-floor flow-operations that are land intensive; at the same time, concentration and specialization led to an increasing dependence upon national rather than local markets for the major firms. These developments weakened the locational advantages of the core and induced the migration of firms to the suburban fringe, where easier access to inter-metropolitan transportation routes is typical, where land costs are less, and where the increasing number of white collar, and semi-skilled and skilled workers required by modern technology are domiciled. These groups, to preserve property values, try to keep out unskilled, low-income families through zoning laws that prevent both doubling up in single units and the construction of high-rise, low-rent units.

Thus, the poor are locked into their slums, with prices and rents continually squeezing them as urbanization proceeds. Furthermore, the availability of urban services such as schools, hospitals, and the promise of a better life continue to attract immigrants and those Canadians being squeezed off the farms and out of small towns as national economic development proceeds. The slum population swells, increasing crowding and further driving up land values. This forces the slum to invade adjacent areas where possible, driving away further users of unskilled labour. Thus, the problem of urban poverty is not only serious; it necessarily deteriorates, creating a situation of hostility and violence in the downtown portions of most of our major cities that is the most alarming of all our urban problems.<sup>47</sup>

If our analysis is valid, and if a city must be seen as a highly complex, dynamic system with a multitude of problems inherent in its evolution, then policies that treat these as *problems IN the city* are doomed to be ineffective. As we shall indicate in Section D, such a perception persists to the present.

<sup>47</sup> In the United States, where the ghetto dwellers are typically black, the reaction has been more violent, reflecting the growing awareness of a clearly identifiable group.



## D. THE URBAN POLICY PROBLEM

### a) *The Theory of Public Policy*

The theory of public policy is essentially a theory of decision making. Society has a set of objectives such that movement towards them constitutes an increase in social welfare. Since the resources of any society are limited, hard choices must be made among objectives at any point in time. Rational policy making thus involves making those public decisions which maximizes social welfare in the light of scarce social resources.

Some basic needs must be met if the public sector is to perform its task effectively. First, there must be a clear notion of society's *objectives* and the relationship between them, so that priorities can be assigned. Second, the volume and composition of society's *resources* must be known so that the resource-costs of different policy mixes can be assessed. Finally, the technology of objective attainment, or policy *strategy*, must be understood, so that the objectives can in fact be attained.

Theoretically, this is simplistic. The questions of interpersonal and inter-group conflict, of the implications of time and uncertainty, are excluded. These all modify the formal results. Despite these qualifications, however, the basic requirements for a clear notion of objectives, resource limits, and policy technology remain intact. Without them, policy will necessarily be irrelevant, unrealistic, or unattainable. With them, there is no guarantee that policy will be optimal, but there is some assurance that, properly qualified, it will be moving in the appropriate direction.

This is not the place to engage in a debate about these elements. For our purposes it is sufficient to note that in Canada, little is known about these three elements. There appears to be no agreement anywhere on objectives, only vague and often one-sided views about resources, and little imaginative work on policy development. Thus, there is an enormous conceptual gap at the pinnacle of policy development that colours all derivative policies and frustrates any attempt to bring order into the overall policy system.

### b) *The Urban Policy Vacuum*

In no area has the absence of clear policy development been so detrimental as in the urban field. There has never been a clearly stated set of urban objectives that derive from and contribute to the nation's goals. It may be claimed that it is unfair to say that there has been a failure to perceive urban problems. Indeed, that is what cities and provinces are primarily concerned with. The difficulty, however, is that there is no framework for dealing with these problems. Solving problems is not policy making, except by default. The seriousness of a problem can be measured only against some standard of what is normal or acceptable. The seriousness of poverty, for example, depends on what our view of non-poverty is. The seriousness of housing costs depends on what cost configuration we judge to be acceptable. In other words, we require a set of objectives against which we can evaluate our performance. But even this is not enough, for it neglects the need to relate problems to each other. How serious our poverty problem is relative to our housing problem depends on how much we value equity as opposed to satisfactory housing conditions. Thus, we need in addition a set of priorities among our objectives. These must relate to our national goals. Until there has been a shift in focus from problems *per se* to problems in a full policy context, there will be little meaning to our efforts to achieve urban goals.

If there has been little appreciation of the essential requirement of agreed-upon urban objectives, the rest of the policy making apparatus is in even worse shape.

Extremely little is known about the structure and potential of the urban system, and there is literally no machinery for developing a rational set of urban policies. This is not to deny that there have been many policies that vitally affect the urban system. Indeed, as we shall indicate in Part III of this Report, most public policy at all three levels of government in Canada has had a substantial impact on this system. But these impacts are random, often perverse, conflicting, and generally chaotic. That the urban system should therefore be in trouble is hardly surprising.

But if the lack of a national urban policy is debilitating, the actual conduct of urban policy in the small is totally inadequate. At the local level, there is a lack of overall policy formulation stemming from archaic jurisdictional divisions, a perverse revenue-raising system, and a strictly environmental concept of planning. No city appears to have any clear set of urban goals; most live from hand to mouth, trying to wrestle with particular problems as they become intolerable. In general, greater attention is paid to physical problems and the provision of physical services than to social problems and social services. This no doubt reflects the strong architectural-environmental bias in the planning departments of the major cities and the political power of the elite group concerned with environment. Some attempts to alleviate jurisdictional problems by creating a new tier of government—metropolitan or regional government—have been made. They appear, however, to be extremely limited in scope and orientation, and their overall effectiveness remains to be seen.

Turning to the provincial level, we again fail to discover a full blown notion

of urban policy. Departments of municipal affairs do exist, but they are generally not innovative, serving rather as constraining bodies for city programs and as intermediaries between local and federal government bodies, particularly CMHC. The rigid tying of grants to the municipalities in conjunction with the unproductive property tax which is the sole independent source of municipal revenue is one feature of this relationship. The rigid criteria of municipal planning is another.

As for the Federal Government, there has never been any federal urban policy in name or in practice. The closest we have come is CMHC's housing, urban renewal, and public housing and land acquisition programs. A careful review of these, however, reveals that they stem from a number of conflicting motives; they do not derive from any concept of an urban system or even an urban unit as a total unit. Other agencies—National Harbours Board, CNR, and Public Works—also have substantial impacts on urban units, but these remain unplanned and uncoordinated.

### c) *Towards an Urban Policy*

Clearly any attempt to develop an urban policy not only must start from an overall policy vacuum, but must overcome the bottlenecks and the vested interests already built into the political system. The essential requirements are

- (1) An agreed-upon set of urban objectives;
- (2) A fuller understanding of the limits of public policy in the urban field;
- (3) A procedure for directing resources to achieving these objectives within these limits—in other words, strategy development.

#### (i) URBAN OBJECTIVES

An attempt to specify urban objectives requires a procedure for collecting interests, aggregating them to eliminate conflicts, and rendering them consistent with overall national objectives.

The collection stage is possibly the most difficult both practically and conceptually. While urban goals must, in the large, be consistent with national goals, they must also, in the small, be based upon the wishes of the inhabitants of the various urban areas. Theoretically we would expect local government to be the vehicle for expressing these local wishes. In fact, there are grounds for raising questions about this presumption. In the increasingly contentious area of urban renewal, for example, it has become apparent that local government has tended to act more in the interest of articulate and powerful groups—the elite-developers, financiers, and businessmen—and against the interest of weaker, though usually larger, groups. Again, in highway planning and land zoning, this bias in local politics has arisen.

Part of the reason for its ineffectuality is the underdeveloped state of local government. The organizational forms and the short planning horizons are throwbacks to the town-meeting politics of the last century. Local government also lacks decision-making authority, as a result of its constitutional status.

Consequently, the priorities in urban decision making reflect those of rural-oriented provincial legislatures, jealous of their own political power and fearful



of the large urban centres with their economic power and their cosmopolitan outlook. The individual urbanite has very little say in the decisions that affect him most. Had the urban system been managed better, this problem might be relatively remote. As we have stressed, policy in the urban area has been totally inadequate. The recognition that the public sector has been unable to manage this increasingly complex process has led to a crisis of confidence on the part of urbanites, involving those that are most severely penalized by that process as well as those that have a more remote but no less profound concern that the quality of their existence in the cities may fall far short of their aspirations.

Any attempt to reverse this trend, in which decisions are made increasingly by bureaucrats and politicians generally neither familiar with nor sensitive to local needs and wants, must involve an attempt to provide machinery for including urbanites at a very micro-cosmic level within the process of interest accumulation.

This goal is not impossible, although it requires an imaginative approach. Within the federal system, there are severe constraints on federal-municipal interaction. To the extent that municipal governments fail in any event to be accurate refractors of local needs, the fact that the Federal Government is a national government opens the possibility of direct community-federal contact. Some institutions for this already exist in embryonic form, such as urban renewal protest groups and tenant associations. Other more comprehensive groupings can be conceived, ranging from neighbourhood councils to local chapters of national parties. The point is that these interests do exist, they urgently require being plugged into the policy system, and they can be within our current constitution.

These, then, are several of the dimensions of interest collection. Following upon this is the process of interest aggregation. Aggregation requires a procedure for resolving conflicts that are bound to arise among the various interest groups. Preferably this should entail discussion, debate, analysis, further discussion, and hopefully, resolution. In cases of severe conflict, adjudication procedures must be developed.

Overall consistency with national objectives must be ensured by a federal presence in this procedure of setting objectives. Otherwise, national policy making itself becomes an ad hoc process of accumulating bits and pieces of interests generated from below. The rationale for a Federal Government quickly dissolves in such a situation.

## (ii) CONSTRAINTS

The chief constraints of the urban system are the limited national resources available for dealing with urban objectives, and the underlying rationale of that system—its form, structural interdependencies, and dynamic mechanisms and the means by which this system creates urban problems. These are matters to which much of this Report is directed.

## (iii) STRATEGY DEVELOPMENT

Directing resources towards achieving urban objectives is the purpose of urban strategy. On the basis of the agreed-upon objectives and fuller knowledge of the

limitations, specific goals can be formulated and assigned priorities. The machinery to ensure that the goals are attained must then be developed. Much of this will exist, but will need to be redirected and rationalized before constituting a useful component of the strategy. Finally, the process must be given specificity by the designing of a set of feasible targets over time, the cumulative attainment of which will ensure ultimate goal achievement.

These, then, are the formal requirements for any rational approach to urban policy. Much of this study is an attempt to discover the evidence currently available on urban objectives, on the urban system, and on urban strategy. On the basis of our findings, limited policy innovations will be suggested. Much more stress will be laid on developing procedures for expanding our policy-making potential—for learning more about urban objectives, constraints, and strategy development.

One substantive finding does emerge from even this theoretical statement, however, and that is that the manpower required to operate this kind of machinery just does not exist in Canada at this time. The few competent persons available are diffused throughout the system—some in government, others in university, and still others in consulting. There is no concentration of effort, and no consequent advance in the technology of policy making in the urban area. In other words, the scarcest resource for the foreseeable future will be manpower.

Two implications follow. The first is that steps must be taken to conserve and rationalize the energy of those available. The second is that an intensive training program must be launched immediately. The two need not be independent; a large institute of advanced research could serve also as an effective training ground for graduate students. Without such moves, the gap between our urban problems and our capacity to deal with them will widen dramatically over the next few decades—a gap that may ultimately preclude any but the most drastic solutions. Closing this gap may well prove to be the greatest of our urban policy challenges of the future.

## E. CONCLUSION

In view of this analysis, defining the urban problem entails much more than a listing of problems found in urban areas. First, the reality of these problems must be assessed. Then there must be an understanding of the centrality of their relationship to the urban system, which imparts to them their essential urban nature. We have found that many urban problems are of this sort, and that it is therefore critical to approach them from a total urban perspective. Finally, that perspective ideally should reflect the ultimate desires or objectives of the Canadian people, particularly those who live in urban Canada.



## Part II: Urbanization in Canada

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Chapter One: The Source of the Urban  
Problem: Urbanization



# Chapter 1

## THE SOURCE OF THE URBAN PROBLEM: URBANIZATION

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# Part II: Urbanization in Canada

## Chapter 1

### The Source of the Urban Problem: Urbanization

#### A. THE MACRO-DETERMINANTS OF THE URBANIZATION PROCESS

In Part I, we have argued that the only meaningful conceptualization of the urban problem is the one that sees it in terms of the urban system itself. The purpose of this chapter is to indicate in more precise terms exactly what that system is, and how the urban problem is intrinsically tied to the evolution of that system.

To accomplish this with any degree of perfection is, of course, impossible. First, the number and complexity of the forces that shape the urban system are as limitless as the variables operating in any human society. In addition, there is a unique difficulty, and that is that many of the determinants of today's urban system have a very long history, affecting not only the growth and structure of individual urban units, but the relationship between these units as well. The pattern of streets in downtown areas of Canadian cities 200 to 300 years old still determines the mix and flow of activity in those cities today. The main links between cities continue to follow old foot paths, riding trails, carriage routes, canals, and railway lines.<sup>1</sup> The location of cities themselves within the nation's geographical space depends on choices made in the dim past with regard to the then pressing exigencies of trade, defence, transport, and industry.

Despite the obvious difficulties in attempting to analyze the forces determining the evolution of the urban system, it is possible to deal with the *major influences* that determine the *broad outlines* of the *modern* urban system. The emphasis is essential. We must exclude those determinants that are random, despite their importance; we must not expect anything like comprehensive explanatory power; and we do not pretend to be able to deal with all urban systems, regardless of degree of sophistication, location, and historical epoch.

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<sup>1</sup> Robert S. Lopez, "The Crossroads Within the Wall", in O. Handlin and J. Burchard, eds., *The Historian and the City*, MIT Press, Cambridge, 1966, pp. 27 ff.

On the other hand, the ability to rise above micro-cosmic detail and survey the macro-mechanisms has yielded extremely fruitful results in the social sciences, particularly those with a strong policy orientation such as the new economics.

### a) *The Mechanisms of Growth*

The central attribute of modern urban systems is that they are inextricably tied to the process of economic growth and development. Ancient cities grew in part because of economic forces, but these were not the forces of development so much as windfall gains that failed to launch sustained expansion. The growth of imperial Rome was a function of the ability of the political authority to extract resources from its colonies. Other means of resource exploitation—location on trade routes (Pirenne) or religious authority—similarly permitted early urban growth. But none of these urban areas could sustain themselves, and when their power to exploit ended, they stagnated and declined.

In contrast, the modern urban unit grew in tandem with the new source of economic power, technological advance. Up to the industrial revolution, London could be viewed as a commercial resource exploiting centre, and indeed the profits from this activity provided the resources to finance the new technology. But it was only with the technological advances of the eighteenth century that the city's expansion became endogenous and self-sustaining, for it is the central feature of this new technology that it is self-reinforcing. Advances build on each other. The rapid succession of improvements in textile machinery were based in part upon improvements in industrial materials, particularly iron. The coking technology of Darby for iron production permitted the textile technology to be particularly effective. Added to this was Watt's steam engine, first using iron to achieve efficiency standards so as to permit effective draining of coal mines, and therefore cheaper sources of energy, and then being used to run the machinery of the rapidly developing textile industry.

From these beginnings, technological improvements were stimulated in all areas of economic life—manufacturing, transportation, communications, and so forth. These became increasingly interdependent and self-reinforcing, accelerating the rate of technological advance to its extremely demanding pace today.

But if technology is the necessary condition for sustained growth, it is not sufficient in itself. The backwardness of much of mankind in the face of readily available technical information attests to this. New technology requires expensive units of equipment in which improvements can be embodied, and for this, there must be an accumulation process of substantial proportions. It further requires increasing investments in human capital to man the new economic structure and to improve it. Finally, it must be validated in the marketplace, for the increased flow of goods and services that are the tangible evidence of economic advance must find purchasers. The capacity of these purchasers to acquire these commodities is enhanced by their increased productivity as a result of the very investment in them, and in the equipment with which they work, that led to the increased output in the first place.

The modern growth spiral can be summarized thus: technical improvement increases output and incomes: higher incomes lead to more spending to absorb output and more savings to finance capital expansion, human improvement, and further technical advance.

### b) *The Mechanisms of Structural Change*

Technological changes and their interdependence constitute the central driving force behind modern economic growth. But it would be naive to assume that this piece of aggregative machinery chugs along on a unilinear growth path. Inherent in the process of expansion are forces leading to changes in the variables and in their relationship to each other that shunt the system onto new growth paths tangential to that of the past. The observed long-term expansion path is essentially the locus of these sequential short-term ones, and reflects the continuing process of *structural changes* that are being generated.

Two key sources of structural change require further analysis. The first entails shifts in the nature of consumer purchases as incomes vary. When incomes are low, most resources are devoted to food and shelter. As incomes rise, there is a universally observed shift to the consumption of proportionately less food and shelter, and more durable and non-durable goods and services (Engel's Law). This shift in demand necessarily leads to a shift in the composition of output from primary to secondary and tertiary industries. This, in turn, leads to relatively slower income growth for primary producers, and relatively faster growth for the others. Ultimately job mobility is induced as the structure of the labour force adjusts to meet changes in taste.

The second source of structural change occurs because technology is not perfectly homogeneous, and because it tends to face diminishing returns in any particular area. Technological change is applied in an extremely selective fashion among industries, and even among firms, depending on the potential gains to be realized, the extent to which the gains can be monopolized, and the relatively erratic process of scientific and technological discovery. Competitive industries such as agriculture preclude heavy private investment in innovation. There are no long-run excess profits in these industries, and the gains from innovation cannot be kept private. As a result, most technological changes occur in the concentrated sectors in which there are usually large, capital-intensive firms, or in new, smaller industries where large potential markets exist. As a rule, the latter are new markets, because the cost of competing in established markets—building a better mousetrap—makes efforts there less productive. Thus, within industries, there is a process of, first, technical change; then very rapid market-filling growth; and a final stage of slower expansion in line with the widening of the market.<sup>2</sup> This latter stage leads to a concentration

<sup>2</sup> For example, until the market for colour television is saturated, the rate of growth of sales may be extremely high. Once every household has a set, the growth rate will become slower partly because of doubling but largely because of new household formation.



of innovation in another area, a break-through, rapid growth, and then retardation.

This sequencing of industrial growth, largely as a result of the selective application of technical change, again constitutes an important source of structural change. The observed aggregate growth path is the net result of the working out of such structural changes.

### c) *The Mechanisms of the Urban System*

The mechanisms of economic growth, then, lead to a series of profound structural changes, which in turn shape the growth process. These mechanisms and structural changes directly affect the development of the urban system.

Consider first the growth process alone. We have argued that growth is dependent on technological change, capital formation in human and physical forms, and the development of markets. All these processes are made feasible, and indeed are optimized, in an urban environment. Where population is dense, access to markets is greatest, labour supplies are plentiful; specialization, a key source of improvement,<sup>3</sup> is made possible; information flows—essential to innovation, education, and efficiency in general—are highly developed.<sup>4</sup> All these elements make possible a rise in productivity and thus in income, and the cycle is completed through consequent increased savings. As a result of this process, higher rates of capital formation are made possible. Increased spending out of higher incomes also accelerates the rate of growth of markets, raises profits and thus savings, improves potential profitability of new investments, and induces further technological improvements.

Cities, then, are what make modern economic systems work. Without them, there may be improvement; but it necessarily will be at a very low level of efficiency, and generally not self-sustaining. It is the city that provides a direct link between all the macro-variables: capital formation, labour supplies, technological change, incomes, markets. Proximity—the essence of the urban system—permits the joining of these economic processes, and the high level of interaction among them provides the sustained thrust to launch modern economic growth.

When we add to this the very real structural changes that accompany growth, the essentiality of the city is even further emphasized. As the growth of income leads to a shift in consumption away from primary and towards secondary and tertiary industries, rural activities may face a secular decline in importance, while urban activities will become dominant. In addition, opportunities for technological change, and the availability of resources required for its development and introduction, are infinitely greater in the urban sector with its large, diversified, and rapidly growing markets.

<sup>3</sup> "The growth of the modern city and the march of the industrial revolution are joint products of a single cultural strand—specialization." Eric Lampard, "The History of Cities in Economically Advanced Areas", in J. Friedmann and W. Alonso, eds., *Regional Development and Planning*, MIT Press, Cambridge, 1964, p. 331.

<sup>4</sup> Richard L. Meier, *A Communications Theory of Urban Growth*, MIT, Cambridge, 1962.



d) *The Properties of the Urban System:  
Connectedness and Hierarchy*

The driving macro-forces that provide the impetus for urban development, and in turn are reinforced by that development, not only lead to the growth of individual cities, but forge links among all cities; thus, the entire urban network is an explicit response to economic development. In a spaceless situation, the efficiency conditions of the development process would lead to the concentration of all urban activity at one point. With the introduction of space, conflicting requirements emerge. The movement of goods and persons across space necessarily will incur certain costs. The greater the distance, the greater the costs will be, and at some point, they will outweigh the economic benefits that arise from concentration in the one centre. Some benefits, however, will always be gained from a degree of concentration. As a result of this conflict between concentration, or scale economies, and transport costs, a number of production nodes will emerge, each of which provides sufficient scale economies to prevent further dispersal, but incurs high enough transport costs to preclude absorption in a larger centre.<sup>5</sup>

Since scale economies vary by industry, we would expect those activities with very large scale economies to be more concentrated. These economies would outweigh increasing transport costs relative to activities with lower scale economies. The same situation would hold with regard to transport costs. Industries with low transport costs would tend to be relatively less widely dispersed than those with high transport costs.

This pattern leads to a hierarchical spatial distribution of urban centres (which has formally been studied in Central Place analysis<sup>6</sup>). The smallest urban nodes cater to immediately surrounding rural areas for particular functions; larger urban nodes with a wider range of functions serve their own immediate surrounding areas as well as those of the smaller nodes because of economies of scale and transport cost interaction for those functions, and so on up. The result is a clear patterning of national urban activity in space that constitutes a highly stable attribute of the urban system.

The presence of this structural feature of hierarchy does not constitute sufficient grounds for taking a systemic view of urbanization. It is largely a static pattern and does not accommodate interaction between urban units in the hierarchy. Central Place analysis has failed to generate this systemic interdependence because of its one-dimensional orientation. It has stressed exclusively the role of central places as markets, or the demand side. As a result, all changes in central places must be explained by the growth and structure of final demand, which depends on the location of individuals as consumers only.

The fact is that all markets have a supply side as well. In a mature economic system, because of extremely high levels of industrial specialization, supply

<sup>5</sup> E. M. Hoover, *The Location of Economic Activity*, McGraw-Hill, New York, 1948.

<sup>6</sup> For a review of this approach, see D. Michael Ray, "Urban Growth and the Concept of Functional Region", in N. H. Lithwick and G. Paquet, *op. cit.*, pp. 40 ff.

linkages are very complex. As a result, most intermediate inputs into the smallest central place have their origin in other parts of the national and even international economy, in some other urban centre. Some of these inputs will require large economies of scale or will have low transport costs; thus, they will flow from large centres down. Others might flow from smaller centres. It is these flows which tie each unit to others in extremely complex ways, constituting the national urban network.<sup>7</sup> The dominance of the larger centres will arise not only because of the diversity of their functions which enables them to meet widespread final demands, but even more important because of an even greater diversity of intermediate activity which is central to their own, relatively faster, rate of development.

The introduction of space, joined with the central role of economic development, leads us to take a systemic view of the urbanization process. Space leads to a dispersal of urban activities, but the economy ties those activities together into an overall, highly connected, and hierarchically patterned system. Urbanization therefore determines not only the growth of individual urban units, but the evolution of the whole urban system. This evolution is what urbanization is all about. It conditions the efficiency and productivity of the economy, and hence its further development. An approach that fails to appreciate the totality of this urban network—that fails to see the impact of city A on city B, and through it the feedback into the whole urbanization-development process—ultimately will be unable to cope meaningfully with urban reality.

### e) *The Individual City Within the Urban System*

Our argument for the importance of the urban system implies a very systematic patterning of urban units. Each city's size and structure would appear to be rigidly determined by this process. It is clear that this has not been the case. Regardless of their size, cities are as diverse as they are similar. It is therefore necessary to see if our analytical tools can be used to reach a greater approximation to reality.

In large centres an additional process begins to take over. Their marketplaces undergo a very specific type of structural change that further enhances the growth process. With enlarged markets, local as well as elsewhere in the urban system, opportunities for industrial specialization emerge. Increasingly, firms become suppliers to other firms, permitting an extremely efficient inter-industrial division of labour. This steady refinement of the city's economic structure—the filling-in of its input-output table—finally permits it to cross the threshold from adolescence to maturity;<sup>8</sup> for the true sign of advanced development is a highly structured industrial network, permitting the subsequent growth of the city itself to be self-sustaining.<sup>9</sup> At that point, the urban economy is a fully developed

<sup>7</sup> The result of these flow patterns is seen in the role of "urban corridors", that themselves play a key role in the evolution of the urban system. See C. F. J. Whebell, "Corridors: A Theory of Urban Systems", *Annals of the Association of American Geographers*, March 1969.

<sup>8</sup> See W. Leontief, "The Structure of Development", *Scientific American*, September 1963.

<sup>9</sup> This is an alternative formulation of the ratchet discussed in W. Thompson, *Preface to Urban Economics*, Johns Hopkins, Baltimore, 1965, pp. 21-24.

economic system. In addition to high levels of efficiency within industries, such systems provide high levels of systemic efficiency, or external economies. For example, the availability of large skilled labour pools provides benefits to all actual and potential firms. Inducements to attract labour and costs of training are much less. The wives of men currently working provide a plentiful supply of additional labour. Transport routes designed to move goods can be used to move persons, and vice versa. Capital markets, designed to finance industry, increasingly can be used to finance consumer spending on the output of that industry.

The aspect of a mature urban economy—the productivity of the system itself<sup>10</sup>—makes these mature urban units of particular interest; for the new dynamism of the mature urban unit, which is the source of its rapid, self-sustaining growth, is also the source of the urban problem as we have conceived it. The very totality of the mature unit imparts to it a high degree of interdependence, much of which is beneficial; but concurrently, this interdependence fosters the urban problem matrix<sup>11</sup> which proves to be so intractable.

In addition, the growth process necessarily leads to differentiation among cities, particularly between rural and urban centres, and large and small cities, but also among like-sized units. As we have seen, small centres exist as central places, providing a range of goods and services for persons engaged largely in primary activities. These places exist mainly to serve the non-urban region, and any expansion is tied largely to that of the region. Under appropriate circumstances the city's growth will outpace that of its hinterland. Incomes and job opportunities in the city will grow faster, attracting labour from the primary sector, further reinforcing urban growth, until the hinterland becomes dependent on the city. The growth of the city then determines the growth of the region, and ultimately spreads out to envelop large segments of it.<sup>12</sup>

As the city grows and its economy diversifies, the stress on its role shifts first from a marketing to a producing unit, and then with further development the latter function also begins to be modified. Large markets provide scope for highly specialized activities: boutiques, opera and theatre, fine restaurants, professional sports, and the other features that led our forefathers to fear the city all become viable in sufficiently large and wealthy urban units. These activities powerfully attract even more persons to move to the city. Note that this dimension of migration is induced not only by greater and more varied employment opportunities, which follow from further inter-industrial specialization, but by the necessary attractiveness of consumption opportunities in those units. There will then be a mutually reinforcing selection process. Cities that stress cultural events (Boston) will attract those who wish to partake. These people will further support such activities and colour the future complexion of the city. Other cities that have other urban specialties— theatre in New York

<sup>10</sup> See P. Bertaux, "The Future of Man", in Wm. F. F. Wald, Jr., ed., *Environment and Change*, Indiana U., Bloomington, 1968, p. 17.

<sup>11</sup> See Part I, Section C (a).

<sup>12</sup> N. H. Lithwick and G. Paquet, "Urban Growth and Regional Contagion", *op. cit.* See also G. Hodge, *Refashioning our Cities Demands Refashioning our Concepts of Cities*, submission to Hellyer task force, September 13, 1968.



and London, sports in Los Angeles—will find themselves attracting relatively interested immigrants in the same way. Indeed, this specialization has been increased because of the substantial economies of scale in providing these services, together with the falling cost of transporting people between cities. Cultural events and athletics can now move across continents, and even between them, with relative ease, while persons seeking them can just as easily jet to where they are. This mobility has further linked the urban system, and especially the mature units, closer together; and so the urban system has been extended internationally. New York and London probably form a closer cultural and economic bond than either does with smaller urban centres in their respective countries.

The evolution of large urban centres into highly sophisticated consumption centres has not been entirely accidental. The presence of articulate citizens with similar tastes has led to the conscious orientation of the city in specific directions. The image of the city itself has been fostered by these persons and groups, so that it comes to represent a very clearly defined urban package. The city, in other words, becomes a highly selective collective urban good. Persons who seek to reside in that city choose it because that specific package is what they desire. Consider the successful battle of San Franciscans to keep their city “charming”, of New Orleanites to keep their city “quaint”, of Londoners to make it “swinging”, of Montrealers to keep it modern yet French. These are outstanding examples, of course. Most cities have no image except the negative attributes of great size, numbers, congestion, noise, violence, homogeneity of suburbs, and a general lack of positive personality.<sup>13</sup>

The role of an urban image has not yet been fully explored.<sup>14</sup> It is a highly subjective concept which requires much more careful analysis. But it is a potentially useful concept, for it might help us understand the restlessness of urbanites. The typical city is now a reactive one. It responds to exogenous events that are beyond its control. It accommodates growth without evaluating the costs and benefits of that growth. It induces new industries to locate without deciding whether the net effect is good or bad. It carelessly permits private and public bodies to make decisions that will not be reversible for a generation. It is hardly surprising that the urbanite is frustrated and discontented; he is being overwhelmed by impersonal forces over which he has no control.

In cities with a clearer image, the impersonality is less obvious. The image reflects a set of values of the citizenry and provides them with a yardstick against which to measure proposed changes. If removing the trams in San Francisco destroys that image, it is bitterly opposed. The image further serves to provide the citizenry with a communal focus that reinforces the sense of community which appears to be absent in most of our urban areas. Finally, it provides all

<sup>13</sup> Arthur L. Grey, Jr., “Los Angeles: Urban Prototype”, *Land Economics*, Vol. XXIV, No. 3, August 1959.

<sup>14</sup> See “The Image of the City”, in Wm. Ewald, Jr., *op cit.* For an approach to classifying cities through factor analysis, see Kenneth J. Jones and Wyatt C. Jones, *Toward a Typology of American Cities*, Florence Heller Graduate School for Advanced Studies in Social Welfare, Brandeis U., 1967 (mimeo). The variables of classification are *Urban Growth and Development* and *Socio-Economic Status*.



urbanites, actual as well as potential, with a real choice. If one values the particular basket of urban goods provided in a city and reflected in its image, one has a real choice—to live there. The greater the variety between cities, the more meaningful is this choice, especially in an era where inter-urban mobility is increasing rapidly.

Thus, this intangible factor of image, which adds substantively to the differentiation between cities, is a potentially useful concept with which to improve the quality of the urban system. By providing a concrete outlet for specifying urban values, by motivating positive community behaviour to ensure the promotion of those values, and by offering all urbanites some real choices, this factor is capable of mobilizing what has become an essentially passive urban society. If we are able to foster this important source of choice, the urban system will have, for the first time, an opportunity to modify its rather rigid relationship to the economy. As we have stressed in the previous chapter, this imbalance in the urban system—its almost exclusive orientation to the pursuit of economic goals—has had severely distorting effects on national life. This, then, is a new opportunity to widen social horizons and it is made possible by the economic security inherent in mature urban units. Our response to the urban problem created by urbanization is in part assisted by this particular feature of urbanization in its advanced form, the potential for urban choice. The seeds of a solution are provided by the same mechanism that generates the urban problem. Correctly diagnosing, nurturing, and manipulating this potential will be one of the major challenges of urban policy.

## B. THE URBAN MICRO-SYSTEM

### a) *The Whole and the Parts: Lines of Force*

In the last section we have shown that the urban system is largely a response to the growth and development of the economy. This is not to deny that the urban system itself is a major contributor to growth. On the contrary, we have traced out the means by which the efficiency of that system shapes the growth path. But it is important to separate cause and effect by sorting out the primary forces from those that are essentially responsive.

The primary cause is the growth process. Where the rate of economic growth slackens, the urbanization process similarly retards. Some evidence of this is contained in *Table 4*.

*Table 4*  
DECADAL RATES OF GROWTH  
METROPOLITAN, ALL URBAN, AND RURAL AREAS

	<i>Metropolitan Regions</i> <sup>1</sup>	<i>Urban Areas</i> <sup>2</sup>	<i>Rural Areas</i> <sup>2</sup>
1921-31	31.1%	31	7
1931-41	12.6%	18	3
1941-51	27.9%	34	—1
1951-61	45.2%	45	4

<sup>1</sup> From Stone, *Table 6.4*, p. 142.

<sup>2</sup> From Stone, *Table 2.1*, p. 28.

SOURCE: L. O. Stone, *Urban Development in Canada*, DBS, 1961 Census Monograph, 1967

Even though we have had to use decadal census data, the decline in economic growth during the Depression years is clearly reflected in the very low rate of urban growth.

Thus, the evolution of the urban system, and therefore its component parts, is affected directly though not exclusively by the economy. The development of each city is largely dependent on its links with the economic system. These can be modified (for example, new industries can be attracted or repelled), but the major determinant of the city's development will continue to be the national

economy. This gives to the urban system a crucial national dimension that is usually lost sight of, particularly in policy analysis and development. In part the fault lies in the simple concept of territoriality that assigns to provinces in whose territory cities happen to be found almost exclusive legislative jurisdiction over them. This pattern is followed despite the fact that inter-city ties across provincial boundaries are far more important than rural-urban ties intra-provincially. Indeed such partitioning of the urban system has led to great inefficiencies: there are many barriers to inter-provincial flows between cities, especially hidden tariffs and subsidies, that reduce the gains from free exchange. Competitive bidding for new industries rather than cooperative planning merely erodes tax bases. Under such arrangements, two jumbo jet airports are required rather than one.

Furthermore, as we have indicated, there are not only closer economic ties between cities, especially mature ones, but cultural and social ones as well. There is much greater similarity of view and interchange of ideas between urbanites whatever their residence than between the residents of a single province. And this is probably true even of the linguistically unique province of Quebec. Trends everywhere appear to confirm this judgement.

The preceding analysis challenges a very formidable body of conventional wisdom. If the lines of influence must be drawn from the top down—from economic development to the growth of the urban system to the growth of the urban unit—the very role of the city in the nation must be re-evaluated. The alternate view, that individual cities are essentially autonomous elements, has led to a serious failure to deal with their problems. The major forces influencing cities do not lie within their control, and policy that assumes the opposite—that individual cities can solve their own problems—is destined to be ineffectual. The analogy that comes to mind is that of the unemployed individual. For decades it was thought that the problem lay with him and could be solved by him. All he had to do to become re-employed was lower his price. The fallacy of this point of view is now apparent. The solution lies in appropriately managing the economic system whose impersonal workings are usually the cause of unemployment. The relation of the part to the whole is not obvious, nor is it always easy to accept. But it must be clearly understood if we are to cope; and if anything, our experience with urban units reveals how completely we have failed to cope up to the present time.

### b) *The Mechanisms of the Urban Micro-system*

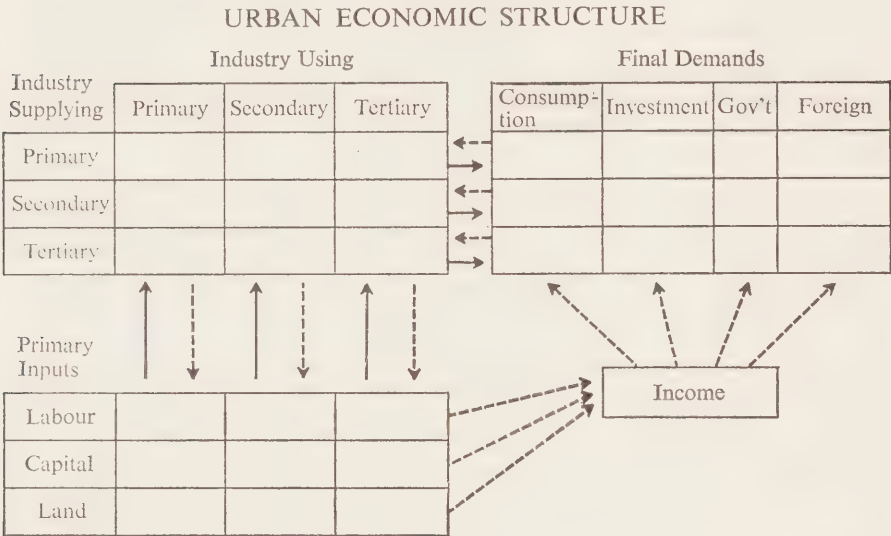
The next stage in our analysis of the urban system involves a narrowing of perspective to focus on the sub-system, or the urban micro-system. Here we are concerned with the functioning of particular cities. Once again we shall deal with the major variables operating in this system, particularly in terms of their dynamics.

It is useful first to conceive of the city as a conventional economic system.<sup>15</sup>

<sup>15</sup> A broader but more abstract approach to the urban unit as a system is provided by Brian J. L. Berry, "Cities as Systems Within Systems of Cities", in J. Friedmann and W. Alonso, *op. cit.*, Ch. 6.

which can be linked directly to the national economy. As an economic system, the component parts and flows of the city can be simulated in an input-output table. Final demands (consumption, investment, government and foreign) are linked with primary inputs (labour, capital, and land) via the industrial structure. This construct is represented in *Figure 2*.

Figure 2



SOURCE: N. H. Lithwick and G. Paquet, *op. cit.*, p. 26.

In this diagram, the dotted lines represent spending flows and the solid lines are real resource movements. As the industrial matrix expands and fills out, the demands for other industrial inputs will increase, and the overall demand for primary inputs (backward linkages) will grow. Incomes will rise and will be spent directly, saved and invested, or taxed away and spent by government (final demand linkages). These new final demands will further expand the industrial matrix, and so on. Furthermore, the development of a particular sector will induce new sectors to emerge using their outputs (forward linkages). A fully developed urban economy will have a complete inter-industry matrix resulting from the increased diversification which, as we have seen, is a necessary accompaniment of growth.<sup>16</sup> Not only will there be an increased variety of final goods and services sought by consumers, business, and government, and increased production opportunities occasioned by greater specialization of labour and capital inputs, but also industry itself will break down into narrow specialties. Secretarial functions, for example, once provided purely by labour employed within a firm, in large part will be replaced by equipment bought from specialized firms—reproduction machines, dictating machines, telephone answering services, and even coffee machines!

<sup>16</sup> For an indication of how the input-output approach can be related to Social Environmental and Governmental (SEG) Problems, see Barbara R. Bergmann, "The Urban Economy and the Urban Crisis", *American Economic Review*, December 1969, esp. p. 642.



Thus, the degree of maturity of the urban economy can be measured by the extent to which it has become a fully articulated eco-system. At some point, its growth will be largely self-sustaining because the spiralling effect of growth can now be maintained by that system.

### c) *The Critical Role of Space in the Micro-System*

Although the economic functioning of the urban unit can be represented by a conventional economic model, it has one unique differentiating feature, and that is the central role of space. As long as we are content to analyze economic development in the abstract, it is useful and valid to ignore the role of geography. But the essence of the urban unit is that space is limited—all activities cannot be located at the same point—while the essence of urbanization is that the increasing number of economic functions have additional space requirements at a central point. As we noted above, the urban feature of agglomeration makes the urban unit the essential locus of modern economic development. The central point is the one which provides greatest access and therefore is the optimal location.

As a result of this conflict between growing space demands and a fixed quantity of space, economic units are forced to choose. Either they will bid away space already pre-empted by other users, if their need for centrality is critical; or they will have to move away from the central point, if the need for adequate space outweighs the need for centrality. In other words, of necessity, each economic unit must make a trade-off between accessibility and quantity of space. The actual choice will depend on the interaction between the objective trade-off in any particular urban unit and the subjective trade-off of the particular economic unit. The objective trade-off is determined by the physical structure of the city—transportation systems, degree of sprawl, density, and so on. The subjective trade-off is determined by the technology of the firm—technical space requirements, location of markets and supplies (primary as well as intermediate inputs). Firms with strong access requirements and low space needs—such as professionals and specialty shops—will locate near the central point. Families with lower access requirements and large space desires will locate away from the central point.

With this mechanism of urban choice, that links the urban economy to the actual cityscape, we can begin to analyze the impact of urban economic expansion on the urban unit. This is the key to understanding the urban problem.

In small central places, the number of economic functions are relatively small and total space needs are correspondingly small relative to the amount available. The objective trade-off is very slight, and thus there is no real problem of spatial choice. As agglomeration increases, the needs for space multiply, and the real urban problem begins to unfold. Assume an additional firm enters. On the basis of the trade-offs, he selects a site. If it is near the central point, he must bid the site away from a user already there, so that the price of land increases. The seller will then go through a similar land acquisition process. If the buyer chooses a vacant site further out, he bids up the price of that land. Its direct

cost will be less, but the saving will be offset in part by the increased private (and public) costs of additional transport.

This firm creates a demand for additional labour. In a fully employed situation, this will induce migration to the city.<sup>17</sup> The migrants will require housing, and again their choice will be based on the relevant trade-offs. The result will be a further increment in the price of land and a further pre-empting of urban space. The firm will also need other inputs, and these backward linkages might stimulate new firms to open or extant firms to expand, further adding to the demand for space, increasing its price and reducing the proximity of further space. Forward linkages will operate in the same manner. The growth in activity and income will lead to new final demands, further inducing new activities with more space demands, and so on.

This process can be modified by new technological developments that alter both the objective and the subjective trade-offs between space and access. Thus, new high-rise technology, occasioned by better structural materials, lifting devices, and pre-cast components, has provided much more space at or near the central point. Indeed, in many cities, the supply of core space appears to be greater than the demand, creating substantial vacancies especially in more obsolete structures. On the other hand, new transit modes—limited access cross-town or circumferential highways, rapid transit, and so on—have reduced the cost of access and speeded up out-migration from the core. The subjective trade-off among firms has been influenced by new types of production technology, such as assembly-line methods which have horizontal motion and are therefore land intensive rather than the vertical, gravity-generated motion of older technologies.

As a result of such technological progress, there is a migration from the central city. The use of cars imposes a storage cost on shoppers, and the need for more economical space has permitted suburban shopping centres to flourish. But technology has also created problems in this central process. Transportation technology requires the use of great stretches of land; roadways, and storage and servicing for the dominant automobile all eat up major segments of urban space. In addition, by providing greater access, they induce the acquisition of larger sites, further expanding urban spread. The relocation of firms in the suburbs accelerates the suburbanization of the labour force, the construction of shopping centres, and the formation and relocation of households in a chain reaction.

Urbanization thus has a unique effect on the city: it creates ever-increasing space needs that continually raise the price of land throughout the urban space. These needs have been modified by changing technology and tastes, but in an unplanned manner that has probably led to a net acceleration of the process. Presumably technology could be harnessed to abet the process, but only if we are clear on what we want, and why. And this we are not.

<sup>17</sup> If there is less than full employment, the process will merely soak up the labour if it is appropriate in terms of skills and the second round effects will be delayed. They can also be delayed even in a full employment situation if new demands can be met by increased participation; for example, by employing females not previously in the labour force.

This immediately leads us to the key question: why are we concerned with rising land costs and sprawl of the urban unit? To most urbanites, this process is not seen as an obvious problem. They are better housed, are extremely mobile, and earn higher incomes. But they are also faced with serious difficulties. Their incomes are chewed up by increasing housing and land costs, their taxes are rising extremely quickly, their mobility is impeded by traffic jams, their streets are not safe, their air and water is polluted, and their political system is unable to deal with these problems.

We have suggested, in Part I, that policy failure results largely from failure to understand the nature of the urban problem, so that rather than a program of prevention, there has been a fiddling around with the symptoms. As we shall now show, the urban problem is created by the problem of space, which in turn is the result of urbanization itself.

#### d) *Urban Space and the Urban Problem*

The primary problem is distribution. With a steady rise in land costs, those who are mobile can trade off accessibility for more and cheaper land at the fringe. This process in turn is caused by and causes the concentric aspect of urban sprawl. To achieve optimal accessibility for autonomously mobile individuals, the urban space must expand at a relatively uniform rate with low densities at the periphery. Otherwise, some segments of land will be closer to the central point than others, and will rapidly be acquired. But concentric development restricts the effectiveness of non-autonomous travel, for the latter requires high densities for efficient collection and distribution.

Contrary to most current notions, the preference for the automobile is a very rational one. By improving accessibility, it gives to the owner enormous benefits—job access, market access, and leisure access—at a relatively low private cost. In absolute terms, however, the cost is high, so that for low-income groups it is not a real option; their incomes preclude adequate resources to invest in capital-intensive cars. Thus, their subjective trade-off forces them to locate closer to the urban centre. As land costs rise, alternative uses tend to displace them. They must continually seek to lower the cost of accommodation by moving to inferior dwellings, or by crowding. The more urbanization takes place, the greater is this pressure upon them.

In a rapidly expanding economy, we would expect increasingly fewer urban poor, as marginal workers become employed. This has indeed happened, and the flight from the inner city is a well-documented phenomenon. But at some point, there will remain hard-core poor who are not employable—the aged, the chronically ill, and the handicapped; female family heads; and those long discriminated against, whose past poverty has created a situation of functional illiteracy, instability, and a lack of job skills that render them essentially unemployable except in the most menial of tasks. Migration and demographic trends can keep this group large and even increasing, so that there is no net reduction in numbers. One result is a *decline* in the overall quality of the population in this area, as the better equipped continually move out and are re-



placed by the unemployables. Consequently, there is not slow improvement, or even stagnation, but actual decline in the status of the area in the face of improvement elsewhere. The frustration and hopelessness of those locked into this situation is reflected in the growing unrest in large urban centres. If we seek to assist these poor, the public resources needed will be immense. Not surprisingly, little has been done to date and the private costs continue to increase.

Urbanization thus has a direct effect on the poor: it makes them even worse off because of the space dilemma. This is probably the most pernicious of the urban problems, because the link between cause and effect is so complex and remote that it is rarely perceived, and because those who obtain the benefits of urbanization can pass off a large proportion of the costs to this particular group.

The other problem areas also are intrinsically tied to the urbanization process. Transportation congestion arises because of the space needs of the automobile. While permitting enormously greater agglomeration and therefore urban efficiency gains, the car is extremely land-using. Moreover, it adds to the consumption of space at an accelerating rate because, with accompanying suburbanization, the need for more cars per household increases. Thus, more cars leading to more sprawl leading to more cars has become one of the great treadmills of the urban scene. If space were not scarce, the problem would not be serious. Transportation networks and storage space could be continually expanded. But the cost of expanding is not constant; it is primarily a function of the cost of land. Land costs are highest in the core because of its centrality. Expensive structures already in place make expansion of that part of the transport system extremely costly. If it is done, the drain on public resources is substantial. In addition, such expansion further bids away land needed by the poor, aggravating their dilemma. If it is not done, congestion increases exponentially, raising the private costs of transport as well as contributing to most of our air and noise pollution.

Again, the problems of housing arise in large part from this root cause. As suburbanization proceeds, access becomes increasingly difficult even with cars and highway networks: for as incomes rise, the opportunity costs of travel time rise accordingly. The subjective trade-off between access and space is reduced, and demands for fringe areas weaken and are channelled into more accessible areas. This drives up land prices throughout the city. The faster the rate of growth, the greater is the pressure on land. High-rise technology has permitted some restoration of the balance by augmenting the volume of space inside the city. But that technology is of limited value to those with families and substantial space needs. They are the ones who face rising housing costs. Meanwhile, the construction of centrally located high-rise has further displaced the urban poor. In addition, it has increased core density, intensified pollution, and augmented the traffic flows in the inner city; and aggravating thereby the transportation problem, it has added substantially to the costs of new servicing needs for denser development.

An additional implication of the suburbanization trend is the continued expansion of new community services, ranging from schools and clinics to



sewers, water mains, and streets. Especially expensive are the labour-intensive services such as education which occupy a majority of the municipality's budget, and which necessarily face extremely rapid cost increases.<sup>18</sup> The joint effect of continued new capital-intensive service needs, which are rapidly inflating as well, impose a continual expenditure drain on municipal resources.

The final effect of urbanization occurs in city hall itself. Most of the problems that are related to the urban process have imbedded in them a rapidly rising cost structure. The revenue base—the property tax—is highly inelastic with respect to urban development. Indeed, it often exacerbates the situation by under-assessing fringe land, lowering thereby its price, and encouraging sprawl. The base of this tax is a poor measure of ability to pay and thus it tends to be quite regressive.

The result is that additional revenue is achieved through across-the-board mill-rate increases which add further to the cost of all land independent of its market value. Perverse distributional and allocational effects follow from this.<sup>19</sup> Alternatively, new sources of tax revenue are induced to locate in the city through tax concessions that tend to forfeit any gains. In the aggregate, the competitive bidding between municipalities is useless in any event.

We have not here tried to evaluate fully all the ramifications of the urbanization process. It will require a major research effort to sort out the relevant variables, to build theoretical models, to improve upon the presently inadequate data so as to test the models and derive empirical coefficients, and then to engage in full system analysis. In this Part of the Report, we have attempted to assemble some of the material to more fully assess urban problems. In the course of our study, we have formed a clearer picture of the relationship of these problems to the urbanization process and to each other.

Despite the incompleteness of these researches, there can be little doubt that the central hypothesis is valid: the major urban problems relate directly to the process of urban growth. Understanding this gives us an entirely new frame of reference for dealing with these problems that promises to be on the right track.

### e) *The Mature Micro-system: Totality, Size, and Rates of Change*

The preceding analysis indicated that the urbanization process holds the key to the urban problem matrix. Not all urban problems are created by this process, and other factors may affect each of them more or less. But this process remains critical because it makes these problems genuinely urban—they are necessarily *OF the city*—and it is the source of their fundamental interdependence.

It is evident, however, that the intensity of the urban problem varies among urban communities. Not surprisingly, this has led to a search for the optimal size of communities. If, by growing, cities encounter increasing benefits and increasing costs, and if beyond some size these costs begin to outweigh the

<sup>18</sup> W. J. Baumol, *op. cit.*

<sup>19</sup> Mary Rawson, *Property Taxation and Urban Development*, Urban Land Institute, Washington, 1961; and Ralph Harvey, *The Economics of Real Property*, George Allen & Unwin, London, 1957.

benefits, the optimal size will be before that point, at a size level where the net benefits are maximized.

Regrettably, this concept of size remains elusive. It is virtually impossible to quantify costs and benefits of a system as complex as an urban unit. More modest attempts have been made to examine the relationship of size to particular costs. For example, in one study it was found that public expenditures increased more than proportionately with urban size. The hypothesis of dysfunctionality of size was subsequently disproved by Breton, who showed that the higher costs could be fully attributed to better quality services.<sup>20</sup>

The search for optimality was abandoned, and more modest aims were set. A major innovation was made by Wilbur Thompson<sup>21</sup> who introduced the idea of the ratchet. At some critical size, a city's growth would become self-sustaining. Up to that point, for the most part growth was exogenously determined and could be reversed. Beyond the threshold, the forces of endogenous expansion would take over and the growth spiral would be launched. This idea has been more fully developed above, where we introduced the idea of a mature urban eco-system. We argued in terms of structure rather than size, although there is clearly a dependency relationship between size and structure. Until we have more useful data, any attempt to specify this threshold of maturity is pure speculation.

The idea of the threshold is particularly important, nevertheless, for it permits us to subdivide the urban system in a useful manner. The mature urban systems tend to be the locus of our major urban problems, because it is there that the urbanization process completely takes over. As long as growth is exogenously determined, the urban system will not be a total one—the problem-creating mechanisms will not be set in full motion. With a mature unit, the process of sustained urbanization involves the whole urban system; all variables become functionally interdependent and the problem matrix begins to form. Thus, our attention will be focussed on mature systems.

This concept of threshold, while useful, does not solve the question of optimality; for if the mature system is the source of problems, it is also, as we have stressed, the source of benefits. The threshold approach offers no guidance for dealing with these normative issues. Our argument, based on the dynamics of the urban process, does offer one alternative, and that is a change-oriented approach. While we do not know very much about the effect of size, we do know more about the effects of rates of change. Very rapid rates of change induce rapid cost increases that cannot be met by the revenue system. The fiscal squeeze is exacerbated by the heavy marginal costs of new infra-structure; and the rapid rate of increase in land prices further aggravates the situation of the poor, induces further suburbanization, adds to traffic congestion and pollution. Since all these effects are recursive, the problem matrix intensifies many-fold.

Any particular urban unit will have an appropriate growth rate that allows

20 Albert Breton, "Scale Effects in Local and Metropolitan Government Expenditures", *Land Economics*, Vol. 12, November 1965.

21 Wilbur Thompson, *A Preface to Urban Economics*, Johns Hopkins, Baltimore, 1965.

the system to adapt with minimum strain. Improvements in the revenue system will permit a higher growth rate of expenditures and, provided that the rest of the system can adjust, a higher rate of urbanization. In later chapters we shall try to evaluate the results of various growth rates. These will not provide all the answers, however. Probably the only solution is experimentation based on adjusting growth rates to see which is preferable.

The real advantage of this growth rate policy is that it permits the mature systems to deal with their hard-core problems. If additional unmanageable space demands are reduced, resources and pressures for dealing with the key urban problems will emerge. The poor can no longer be forgotten, older houses can be rehabilitated rather than bulldozed, the automobile treadmill can stand relatively still, and housing costs can settle down.

The obvious question is what to do with the enormous additions to our urban population that are anticipated. If the urban economy is highly efficient, surely reducing its development is folly. The solutions to the problem are clear, and derive from the dual urban need for space and access. Modern technology can provide collective access very cheaply. It can also move goods and persons very quickly if it can avoid conflict with other modes, and if stops can be minimized. Current mass transit systems fail because of some or all of these constraints. Only automobiles are efficient collectors; buses also conflict with cars, while subways and commuter trains make too many stops. Because of their urban orientation, they all add to the sprawl phenomenon as well.

The solution is to develop access to the point where space is no longer scarce. This can now be done. Induction trains can move at four miles per minute, so that a 20-minute ride—less than almost all commuter rides—takes one 80 miles into the countryside, where space is not scarce. The need for low-cost collection implies new urban units, and the spectre of the new town is raised once more. But this is a new variant, one that permits the metropolitan economy to continue to grow because it maintains access to additional resources and markets in these new communities. Thus the benefits of urbanization continue to flow. The costs, which are attributable to the space constraint on urbanization, are minimized because space demands are focussed on a relatively unlimited supply.

The advantage of the new community is that the public sector can own the land. Even sold at market value, it will be lower in price than land in the metropolitan area. Increments in price can be used as an important, highly elastic source of public revenue. Land use can be planned to optimize expansion, rather than serving as a constraint. With new technologies of movement, of construction, of whole system planning, many of the cost-generating bottlenecks of the older urban systems, locked into their past, can be avoided. New economies from a total systems approach—global climate control, recycling systems, movement of goods and persons—can be achieved. In other words, the new town can minimize costs, while access to the metropolitan area can maximize benefits; the net effect is an approach to optimality over time.

Such a solution is highly flexible. As new towns mature, further units can be developed that are also "plugged-in". Communities with different forms and



values can emerge to offer real urban choices. The plan is essentially to manage urban growth, not constrain it. With the forecast rate of increase in urban size as rapid as it is, only such a solution offers any real prospect of dealing with our problems. It is not enough to handle new problems, for the older issues remain. This two-pronged attack appears to offer the only hope for alleviating both, by giving us the opportunity to solve the old, and to anticipate and thereby avoid the new.

### C. CONCLUSION

The roots of the urban problem lie in the very process of urbanization itself. This in turn is an essential dimension of national economic development. Solving the urban problem requires first and foremost a clear understanding of this relationship. Attempts to remove the symptoms alone have been and will continue to be as effective as pushing on a string. Any long-term solution must deal with the urbanization process. It must remove the inherent constraint of space which leads to the degenerative conditions associated with urbanization, while preserving the great benefits that are created by that process. To expect solutions on a scale that is far superceded by the magnitude of the problem is naive. Yet this problem will be the one facing most Canadians in the decades to come. Dealing with it will not and cannot be simple. Alternatives are at hand that might provide the solution, but they require a new depth and breadth of vision and of commitment—nothing less than a national urban policy.



## Part II: Urbanization in Canada

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### Chapter Two: The Process of Urbanization in Canada



Chapter 2  
THE PROCESS OF URBANIZATION IN CANADA

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## Chapter 2

### The Process of Urbanization in Canada

#### A. THE EARLY HISTORY OF URBANIZATION IN CANADA

The foregoing chapter presented a theoretical analysis of the urbanization process. In this chapter, we seek to "test" the validity of our model by subjecting it to the realities of Canadian urbanization. We do not intend by this method to prove the model to be accurate; that would require an analysis of a sufficient number of different systems to permit a statistically significant judgement. For the moment, our aims are more modest. We are attempting to understand the Canadian urbanization process regardless of its generality, and to this end the model will provide us with a technique by which information on the Canadian experience can be systematically organized and evaluated. This chapter presents the results of our analysis.

##### a) *Staple Exports as the Engine of Growth*

Our theoretical analysis emphasized the importance of history in determining basic features of the urban system. In Canada, this relationship can be seen clearly, particularly because of the specialized nature of our early economic development.

Canada's economic development has been analyzed by H. A. Innis and synthesized by M. H. Watkins into a *staple theory* of growth.<sup>1</sup> Canada's early economy was based on exogenous demands for a sequence of resource exports, beginning very early with cod, through fur, timber, and wheat in the seventeenth to nineteenth centuries, and finally to minerals and fuel oils in this century. The particular sequencing of resources had a profound impact on the shape of the urban system. With exports of fish and timber, maritime port cities developed, particularly Halifax. As furs grew in importance, continental penetration by the voyageurs led to the focussing of international trade on Montreal. Wheat had a

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<sup>1</sup> M. H. Watkins, "A Staple Theory of Economic Growth", *Canadian Journal of Economics and Political Science*, Vol. XXIX, May 1963.

different impact; for, in contrast to the continuous shifting of base of operation for the earlier staples, wheat technology requires residentiary settlement.<sup>2</sup> Inevitably, true central places began to develop in the wheat-growing areas, the prairies. These had to be linked to the grain export ports, first Montreal and then Toronto, and subsequently the railway emerged as the main inter-urban link of the past and present century.

But central places need their intermediate inputs and final outputs from larger centres. At a very early stage of development, these were imported from the United Kingdom and then from the United States. As exports continued, domestic incomes rose; markets reached adequate scale, and domestic production, first concentrated in Montreal and then increasingly, because of its more advantageous location, in Toronto, began to replace imports. This shift from Eastern to Central Canada was abetted by the shift of export markets to the United States as the mineral phase of the staple sequence emerged, and as the share of foreign capital from the States began to displace that from the United Kingdom. Coincident with this shift to the States was the shift of the centre of gravity of the American economy itself to the West. This led to a second north-south line of force operating on Canadian cities which further weakened the East, and which culminated in the phenomenal growth of the west coast in the United States and therefore of Vancouver. In recent years Vancouver has further expanded as a result of Canada's rapidly increasing post-war trade with the Far East—Taiwan, Hong Kong, and particularly Japan.<sup>3</sup>

The growth pattern of the Canadian economy therefore has been affected very directly by these major exogenous forces. This patterning can be clearly seen in *Table 5*.

The critical role of urban Canada in national development is clearly seen in the last line of the above table, where population growth was, in the last half century, almost exclusively in the largest urban centres.

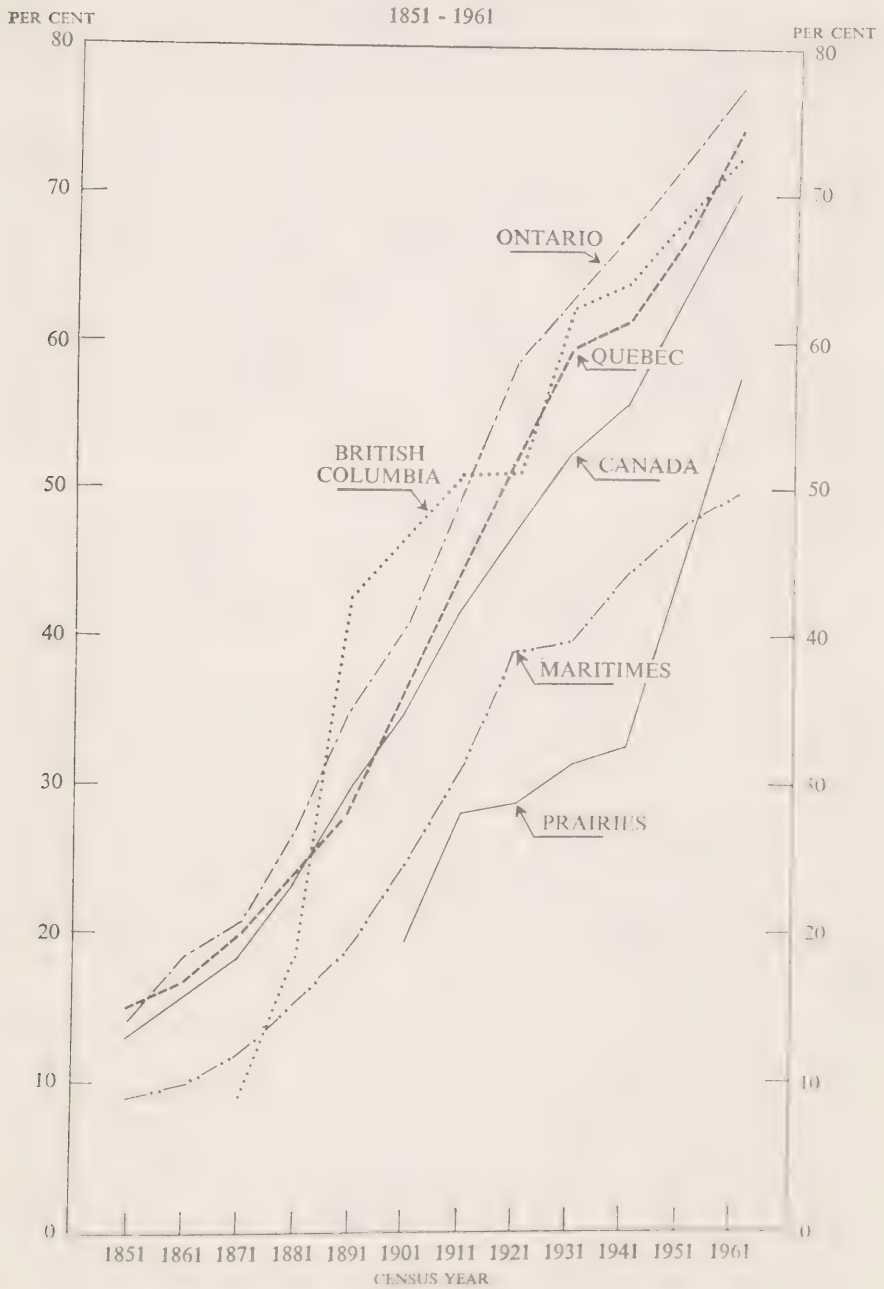
The sequencing of major urban growth from East to West is clearly seen from this table. Even within regions, there is the same tendency. Further evidence, involving all urban areas, is summarized in *Chart 2*. The role of the very early response to staples is omitted because of lack of data, but the differential levels and slopes of the curves do substantiate the importance of these exogenous forces in determining the timing and location of urban growth in Canada.

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2 Douglass North, *The Economic Growth of the United States, 1790-1860*, Prentice-Hall, Englewood Cliffs, N.J., 1961.

3 For a more comprehensive review of this relationship of urbanization to national development patterns, see C. F. Osler, *The Process of Urbanization in Canada, 1600-1961*, M.A. Essays, Department of Economics, Simon Fraser University, March 1968. See also L. O. Stone, *op. cit.*, Ch. 2.

Chart 2  
PER CENT OF POPULATION URBAN, CANADA  
AND MAJOR REGIONS



SOURCE: L. O. Stone, *op. cit.*, p. 32.

*Table 5*  
THE GROWTH OF MAJOR URBAN CENTRES

<i>Historical Increase in Population of Metropolitan Areas (thousands)</i>					
REGION	CITY	1650-1750*	1750-1850	1850-1900	1900-1950
East	Charlottetown		7**	5	6
	Saint John		27**	23	46
	Halifax		25**	26	130
Quebec	Quebec	3	32	54	266
	Montreal	8	69	296	1,534
Ontario	Kingston†		8**	10	36
	Ottawa		15**	81	334
	Toronto		31**	241	1,553
	Hamilton		14**	65	304
Prairies	Winnipeg			48	428
	Regina			2	110
	Edmonton			3	324
	Calgary			4	273
West	Vancouver			27	763
	TOTAL			858	6,107
	CANADA			2,893	8,299
	% of Increase in Urban Areas			30	74

\* Dates are approximate.

\*\* Population as of 1850.

† In 1831, Kingston was actually larger than Toronto (then called York).

SOURCE: C. F. Osler, *op. cit.*

### b) *The Shift to Endogenous Development and the Evolution of Mature Urban Units*

Despite this shift in relative importance, the absolute growth of urban centres has continued to be very substantial in all regions (*Table 6*). Thus, it appears that the inter-industrial and hence inter-urban links were already forged, so that regardless of the locus of initial new export demands, the linkages in the economy led to a system-wide expansion with regional variations. In addition, by 1900 the larger urban centres, especially Montreal and Toronto, had become sufficiently large and their economies had become so well developed that they can be judged to have achieved the maturity stage of self-sustained growth. The economy itself therefore was on the threshold of such a developmental phase, because so much of the nation's modern economic activity was concentrated in these two centres.

Vancouver's recent growth has been extremely rapid, bringing it to the mature state by the start of the 1960's.

*Table 7* presents some comparisons of Canadian metropolitan growth performance with that of similar-sized United States metropolitan areas. Toronto and Montreal grew faster, by a substantial margin, than all comparable cities in the States. This finding reflects the higher growth rate in Canada than in the United States over this period, and the higher labour intensity of that growth.<sup>4</sup>

<sup>4</sup> Economic Council of Canada, *Sixth Annual Review*, 1969, p. 23. From 1950 to 1962, real output in Canada and the United States grew by 4.8% and 3.3% respectively. Employment contributed 1.5 and 0.9 percentage points to these growth rates.



It may also reflect the greater polarization of the two largest Canadian cities, whose counterparts are substantially smaller than the major centres in the States by a factor of up to four. The table also reveals the western drift of urban growth in the States that has paralleled the situation in Canada.

Thus, we can observe the close relationship between national economic development and the urbanization of these leading cities. Early exogenously determined national development led to the highly specific patterning of urban growth. The fact that this development was sustained through a fortunate sequence of export expansion permitted the basic conditions for urban development to emerge: incomes rose, markets expanded, capital and labour accumulated, appropriate structural changes were forthcoming, and these were capable of launching a sustained growth process. But the very success of this urban development entailed the transformation of the economy itself, so that Canada soon was launched on its current development path.

These trends are readily seen in the changing structure of the economy. In 1870, over half of economic activity was primary, and therefore non-urban. By the 1920's, this proportion had fallen to one-quarter, and currently it stands at just over one-tenth.<sup>5</sup> Thus, the role of staples as the engine of growth has been

Table 6

POPULATION FOR THE PRINCIPAL REGIONS OF  
METROPOLITAN DEVELOPMENT IN CANADA, 1901-1961

<i>Principal Regions of Metropolitan Development</i>	1901	1911	1921	1931	1941	1951	1961
Population (in thousands)							
Halifax.....	51	58	75	79	99	134	184
Montreal.....	415	616	796	1,086	1,216	1,504	2,156
Quebec.....	117	133	158	207	241	297	383
Hamilton.....	79	112	154	190	207	266	359
London.....	52	61	74	87	97	129	181
Ottawa.....	103	133	168	197	236	296	436
Toronto.....	303	478	686	901	1,002	1,264	1,942
Windsor.....	22	32	66	117	129	163	192
Winnipeg.....	48	157	229	295	302	357	476
Calgary.....	8	56	78	103	112	156	290
Edmonton.....	15	48	87	116	136	211	374
Vancouver.....	—	—	224	338	394	562	790
CANADA.....	5,324	7,192	8,776	10,363	11,490	13,623	17,743
Per cent change in population since last census							
Halifax.....	—	13.4	30.6	4.1	25.5	35.8	37.3
Montreal.....	—	48.6	29.2	36.3	12.1	23.6	43.3
Quebec.....	—	13.9	18.5	30.7	16.7	23.0	29.2
Hamilton.....	—	40.6	37.5	23.7	8.8	28.7	34.9
London.....	—	18.5	20.9	18.0	11.6	32.7	40.6
Ottawa.....	—	28.4	26.4	17.6	19.9	25.3	47.2
Toronto.....	—	57.7	43.6	31.3	11.2	26.2	53.6
Windsor.....	—	44.7	103.4	77.2	10.6	26.1	17.6
Winnipeg.....	—	223.7	46.0	28.7	2.4	18.1	33.4
Calgary.....	—	570.2	39.5	33.0	8.1	39.7	85.8
Edmonton.....	—	215.5	83.0	32.4	17.9	55.1	77.1
Vancouver.....	—	—	—	51.3	16.5	42.7	40.6
CANADA.....	—	35.1	22.0	18.1	10.9	18.6	30.2

SOURCE: L. O. Stone, *op. cit.*, Table L.5, p. 278 and L.1, p. 269.

<sup>5</sup> N. H. Lithwick and G. Paquet, *op. cit.*, Table 2-3, p. 29.

Table 7

COMPARATIVE GROWTH RATES:  
METROPOLITAN AREAS IN CANADA AND THE UNITED STATES

METROPOLITAN AREA <sup>a</sup>	Population 1960	Per Cent Change 1950-1960
<i>Metropolitan Toronto<sup>b</sup></i>		
Municipality of Metropolitan Toronto.....	1,618,787	44.9
Census Metropolitan Area.....	1,824,481	50.7
<i>Other Census Metropolitan Areas in Canada with More than 500,000 Population in 1961</i>		
Montreal.....	2,109,509	43.3
Vancouver.....	790,165	40.6
<i>Metropolitan Areas of the Same Size Range in the United States<sup>c</sup></i>		
St. Louis, Mo.-Ill.....	2,104,669	19.9
Washington, D.C.-Md.-Va.....	2,001,897	36.7
Cleveland.....	1,909,483	24.6
Baltimore.....	1,727,023	22.9
Newark, N.J.....	1,689,420	15.0
Minneapolis-St. Paul.....	1,482,030	28.8
Buffalo.....	1,306,957	20.0
<i>Selected Metropolitan Areas in Western United States</i>		
Los Angeles-Long Beach.....	6,038,601	45.5
Houston.....	1,243,158	54.1
Dallas.....	1,083,601	45.7
Denver.....	929,383	51.8
Fort Worth.....	573,215	46.0

<sup>a</sup> Population figures for the United States<sup>c</sup> cities are for Standard Metropolitan Statistical Areas 1960.

<sup>b</sup> Metropolitan Toronto population figures are for 1951 and 1961.

<sup>c</sup> Includes Standard Metropolitan Statistical Areas with between 1.3 million and 2.3 million population in 1960.

SOURCE: Robert A. Murdie, *Factorial Ecology of Metropolitan Toronto, 1951-1961*, Department of Geography, Research Paper No. 116, University of Chicago, 1969, Table 1, p. 3.

continually reduced, and endogenous urban growth has taken over. This does not mean that the economy has become autarchic; indeed, foreign trade still accounts for one-quarter of Canada's GNP. But this trade increasingly is based on industrial specialization on a continental scale, rather than on primary products exclusively (Table 8). Such specialization is intimately connected with the urbanization process, for the source of most of our exports and the destination of most of our imports is increasingly the urban system.

Table 8

COMMODITY COMPOSITION OF TRADE, CANADA, 1957-1968

	1957		1968	
	Exports	Imports	Exports	Imports
Grain.....	8%	—	5%	—
Industrial Materials.....	53%	29%	43%	21%
Highly Manufactured Products.....	6%	31%	25%	44%
Services.....	25%	31%	21%	29%
Other.....	8%	8%	7%	7%

SOURCE: Economic Council of Canada, *Sixth Annual Review*, September 1969, Table 5-5, p. 89.

The link between the development of the Canadian and the American urban systems has not yet been analyzed in detail. One study of capital flows suggests very strong systemic links.<sup>6</sup> Other material, such as emigration, transport, and information and commodity flows, would probably substantiate the major impact of the American urban system on the Canadian. This interdependence undoubtedly has accelerated the economic development of the major Canadian urban centres, but the close linking has also contributed to an increasing loss of Canadian identity and possibly independence<sup>7</sup> for these centres, particularly if polarization is occurring on a continental scale. For some Canadians at least, this effect represents an additional cost of our current urbanization process that warrants some additional thought.

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6 D. Michael Ray, "Urban Growth and the Concept of Functional Region", in N. H. Lithwick and G. Paquet, *op. cit.*, pp. 60 ff.

7 The monopolization of information resulting from the technological superiority of the United States in the computer field is already of concern, not only because of possible public policy limitations, but because of the potential for influencing individual Canadians.

## B. THE DIMENSIONS OF MODERN URBANIZATION IN CANADA

### a) *Economic Transformation*

The quality of economic data on urban Canada is rather low. There has been no systematic attempt to collect it in the past, and the current material is fragmentary. Because the urban link to economic development is so central to our hypothesis, we have attempted to make the best of a bad situation by using a variety of materials, but largely in a descriptive fashion. Analysis within the structural framework is limited to labour force data. The more elaborate structural analysis we have developed will require a serious attempt to build urban input-output tables, and to back-cast them.

Despite the lack of data, there can be little doubt about the economic maturity of our major urban centres, Montreal and Toronto. The high rates of growth and shares in the key macro-variables—labour force, income, and capital—and their growing structural complexities have been well documented.<sup>8</sup> In *Table 9*, we present a rough synopsis of these developments.

A parallel development of smaller metropolitan areas has been observed, although only Vancouver has attained a degree of sophistication approximating that of Montreal and Toronto. A number of centres, however, have particular features that indicate that they are on a sustained growth path, because of rapidly growing markets (Oshawa, Oakville), because of a highly developed industrial structure (London, Winnipeg, Calgary), or because they have a real advantage in selected areas (Edmonton, oil; Hamilton, steel; Ottawa, Quebec, and Halifax, public administration).<sup>9</sup> Because the latter are key inputs into the economic system, all these areas are highly responsive to the rapid economic growth of the

<sup>8</sup> See, for example, the study of W. G. Gray, M. Jalaluddin, and F. Charbonneau, *op. cit.* Also, the analysis of Donald P. Kerr, "Metropolitan Dominance in Canada", in John Warkentin, ed., *Canada—A Geographical Interpretation*, Methuen, Toronto, 1968.

<sup>9</sup> L. O. Stone, *op. cit.*, p. 193.



Table 9  
ASPECTS OF URBAN ECONOMIC GROWTH AND STRUCTURE

METRO- POLITAN AREA	MARKET AREA		LABOUR FORCE		CAPITAL AND PRODUCTION					
	No. in Area 1964	C. Inc. 1951-1964	Retail Sales Inc. 1951-1964	Managers and Professionals 1961	Income (Pers. Disp.) % of Can.		No. of Mfg. Establish- ments (1964)	Indust'l Energy Consumption MKWH 1963	Value of New Construction Million \$ (1964)	Total Value Added % of Canada 1965*
					1962	1951-1962				
Montreal	3,032	57	85	20.5	13.6	107	5,144	4,847	540	16
Toronto	3,038	72	78	21.2	15.4	102	5,115	3,011	603	18
Vancouver	1,019	57	55	21.5	5.9	95	1,701	619	188	4
Ottawa	778	48	76	23.9	3.1	124	333	349	148	1
Winnipeg	631	41	52	18.9	3.3	89	1,008	277	97	2
Hamilton	572	71	71	17.8	3.0	88	713	1,897	91	6
Quebec	556	34	101	21.5	1.6	158	570	17	64	1
Edmonton	940	60	112	22.0	2.4	144	519	343	114	1
Calgary	617	75	59	23.1	2.2	142	412	377	96	1
London	707	33	110	20.5	1.3	108	319	263	52	1
Halifax	597	23	68	19.3	1.1	126	144	59	26	—
Windsor	366	24	21	19.6	1.1	45	391	326	44	2
Regina	215	44	26	22.1	0.8	109	122	92	36	n.a.
CANADA		39	87	19.1	100.0	106	33,630	73,311	5,379	100

\* DBS, *Canada Yearbook*, 1968, Table 16, p. 714.

SOURCE: Canadian Daily Newspaper Publishers Association, *Canadian Markets Data Manual*, 1965.

Table 10  
EMPLOYMENT STRUCTURE IN CITIES, 1931-1961  
SHARE IN NATIONAL EMPLOYMENT BY SECTOR

CITY	Primary Industries	Manufacturing	Construction	Utilities	Transportation	Trade	Finance et al.	Services	Government	N.E.S.	Total
Quebec	—	2	2	2	1	2	1	2	3	1	1
1931	—	1	1	1	1	1	1	1	3	1	1
1961	—	15	15	11	12	1	15	11	12	8	9
Montreal	—	11	7	6	10	13	11	8	5	9	8
1931	—	1	1	2	1	2	2	2	10	1	1
1961	—	1	2	1	1	1	2	2	8	2	2
Ottawa	—	13	9	13	8	13	17	10	10	4	7
1931	1	6	5	5	5	5	9	7	5	6	5
1961	—	4	2	2	1	2	2	2	2	1	2
Toronto	—	3	2	1	1	1	1	1	1	1	1
1931	—	1	1	1	1	1	2	1	1	1	1
1961	—	1	1	1	1	1	2	1	1	1	1
Hamilton	—	1	1	1	1	1	1	1	1	—	1
1931	—	1	1	1	1	1	1	1	1	—	1
1961	—	1	1	1	1	1	1	1	1	—	1
London	—	1	1	1	1	1	1	1	1	—	1
1931	—	1	1	1	1	1	1	1	1	—	1
1961	—	1	1	1	1	1	1	1	1	—	1
Windsor	—	1	1	1	1	1	1	1	1	—	1
1931	—	1	1	1	1	1	1	1	1	—	1
1961	—	1	1	1	1	1	1	1	1	—	1
Winnipeg	—	3	3	4	3	5	5	4	2	3	2
1931	—	2	2	2	3	2	3	2	2	2	2
1961	—	1	1	2	1	1	1	2	2	1	1
Edmonton	—	1	1	—	2	2	2	1	3	2	2
1931	—	1	1	1	1	1	2	2	2	1	1
1961	—	1	1	1	1	2	2	1	2	1	1
Calgary	—	1	1	1	2	2	2	1	2	1	1
1931	1	1	1	2	2	2	2	2	2	2	2
1961	1	3	4	2	5	5	5	4	4	4	3
Vancouver	—	2	2	2	3	4	4	3	2	3	3
1931	—	2	2	2	3	4	4	3	2	3	3
1961	—	2	2	2	3	4	4	3	2	3	3

SOURCE: Appendix Tables A-2 to A-13.

Table 11  
EMPLOYMENT STRUCTURE IN METROPOLITAN AREAS, 1941-1961  
SHARE OF NATIONAL EMPLOYMENT BY SECTOR

METROPOLITAN AREA	Primary Industries	Manufacturing	Construction	Utilities*	Transportation	Trade	Finance et al.	Services	Government	N.E.S.	Total
Quebec	—	2	3	—	2	2	2	3	5	3	2
1961	—	2	2	—	2	2	2	3	4	2	2
Montreal	—	18	15	11	15	16	21	14	12	20	11
1941	—	18	13	10	16	13	18	13	9	14	12
Ottawa	1	2	2	2	2	3	4	3	17	6	2
1961	—	1	3	2	2	2	3	3	12	3	3
Toronto	—	16	11	13	10	17	23	11	11	15	10
1941	—	17	12	14	11	15	23	13	9	11	12
Hamilton	1	4	2	2	1	2	2	2	1	2	2
1941	—	4	2	2	1	2	2	2	1	2	2
1961	—	4	2	2	1	2	2	2	1	2	2
London	—	—	—	—	—	—	—	—	—	—	—
1941	—	1	1	1	1	1	2	1	1	1	1
1961	—	3	1	1	1	1	1	1	1	2	1
Windsor	—	2	1	1	1	1	1	1	1	1	1
1941	—	3	4	3	6	6	6	4	3	5	3
Winnipeg	—	4	3	4	5	4	4	3	3	3	3
1961	—	—	—	—	—	—	—	—	—	—	—
Edmonton	—	—	—	—	—	—	—	—	—	—	—
1941	—	1	3	2	3	3	2	2	3	2	2
1961	—	—	—	—	—	—	—	—	—	—	—
Calgary	—	1	2	2	2	2	2	2	2	2	2
1941	—	1	2	2	2	2	2	2	2	2	2
1961	1	1	5	2	6	6	7	5	4	6	4
Vancouver	1	4	5	2	6	6	7	6	4	5	5
1941	1	4	5	2	6	6	7	6	4	5	5
1961	1	4	5	4	6	6	7	6	4	5	5

\* Only city totals available for 1941.

SOURCE: See Table 10.

economically leading areas, and the prospects for completing their economic development appear to be very good.

In addition to this selected material, we have assembled comprehensive information on one key aspect of the evolving urban economic structure, and that is the structure of the labour force in the key urban areas. This information is summarized in *Tables 10 and 11*.

The major city share in overall employment clearly has declined somewhat in the East and has tended to rise in the West, a trend we have already noted with regard to population. The role of primary industry, however, which is essentially non-urban, tends to distort this picture. Over the period 1931-1961, the share of primary industry in the national labour force declined from over one-third to under one-sixth. Thus, part of the reason for the weakness of the decline in total urban shares in the labour force is the shift out of primary industry, which necessarily increases the importance of urban activities. If we examine the various sectors individually, we observe a systematic and much sharper *decline* in the relative position of the Western cities. This finding tends to conflict with our stress on economic polarization.

The reason for this emerges in *Table 11* when we examine entire metropolitan areas, rather than the cities proper. If the process of flight from the core is indeed taking place, our wider-area data should reveal this. The evidence indicates that this is in fact what has been happening. Overall major metropolitan area shares in the labour force have tended to increase, as have shares in most of the individual industrial sectors. Polarization has indeed taken place therefore, but it has been subject to the constraints of the micro-urban process of suburban drift of persons and jobs.

## b) *Demographic Responses*

The mechanisms that have led to the development of the urban economic system have had a direct impact on the demographic structure of urban Canada, and hence on the nation as a whole. With economic growth increasingly concentrated in the larger urban centres their relative attractiveness—particularly in terms of higher wages for labour and more employment for the highly skilled, but also because of the increased variety of consumer goods and services<sup>10</sup>—leads to an increasing concentration of population. The evidence on incomes, employment, and expenditure has been provided elsewhere.<sup>11</sup> In this section we trace out the demographic responses to urban concentration.

The increasing concentration of the Canadian population is shown in *Table 12*. Note that this steady shift to the major urban centres has continued with one very significant deviation, and that is the retardation during the Depression. Over the past century, there has been an eighteen-fold expansion in the number of urban centres over 100,000 in size, a twelve-fold expansion in the number of cities of 30,000-100,000, and a nine-fold increase in the number of units under

<sup>10</sup> D. Michael Ray, in N. H. Lithwick and G. Paquet, *op. cit.*

<sup>11</sup> See part (a) of this section, and Research Monograph No. 1 in particular.



Table 12

## POPULATION IN THE PRINCIPAL REGIONS OF METROPOLITAN DEVELOPMENT (PRMDs), CANADA AND MAJOR REGIONS, 1901-1961

CANADA <sup>a</sup> AND MAJOR REGIONS	1901	1911	1921	1931	1941	1951	1961
Population in the PRMDs ('000) <sup>b</sup>							
CANADA	1,338	2,076	3,103	4,098	4,615	5,904	8,575
Maritimes.....	102	111	138	141	170	212	280
Quebec <sup>c</sup> .....	532	750	954	1,292	1,457	1,800	2,539
Ontario <sup>c</sup> .....	629	908	1,266	1,640	1,851	2,354	3,452
Prairies.....	76	307	459	616	657	853	1,352
British Columbia.....	—	—	287	408	480	684	953
Percentage of the total population in PRMDs							
CANADA.....	26.0	30.5	35.4	39.5	40.2	43.3	48.3
Maritimes.....	11.4	11.9	13.7	14.0	15.0	16.9	19.4
Quebec <sup>c</sup> .....	33.1	38.3	41.4	46.0	44.7	45.4	49.5
Ontario <sup>c</sup> .....	28.2	35.3	42.4	46.9	48.0	50.2	54.2
Prairies.....	18.0	23.1	23.5	26.2	27.1	33.5	42.5
British Columbia.....	—	—	54.8	58.8	58.7	58.7	58.5

<sup>a</sup> Exclusive of Newfoundland, Yukon Territory and Northwest Territories.

<sup>b</sup> Regional figures may not add to Canada total due to rounding error.

<sup>c</sup> Because Ottawa MA is partly in Ontario and partly in Quebec, Hull County in Quebec has been allocated to the Ontario total.

SOURCE: L. O. Stone, *op. cit.*, Table 6-2, p. 13.

30,000. Furthermore, the rate of growth of the largest metropolitan areas has been faster than that of all other urban centres.<sup>12</sup> Urban growth, in other words, has become increasingly polarized in the largest urban centres. This is not to deny that selected smaller urban centres have grown extremely fast, or that selected metropolitan areas have had relatively slower growth rates; but the general pattern remains one of polarization.

The sources of this demographic pattern are natural increase and net migration. In general, the rate of natural increase in metropolitan areas has been lower than in the rest of the country. This means that the potential supply of labour from the cities themselves has been growing at a lesser rate than in the non-urban areas. The very rapid growth of the urban economy has imposed rapidly increasing demands for labour, substantially greater than the urban supply can meet. This had led to a sustained net migration into the city, accounting for over half of the population increase in metropolitan areas over the past 40 years.<sup>13</sup> Much of this increase has occurred at the expense of the rural areas, but in addition a substantial number of migrants from outside the country augment this urban increase.

The relative importance of various migration flows is summarized in *Table 13*.

<sup>12</sup> See Part I, Table 3.

<sup>13</sup> L. O. Stone, *op. cit.*, Table 6.4, p. 142 for regional data and Table 9.2, p. 179 for metropolitan area data.

Table 13

STRUCTURE OF POPULATION 14 YEARS OF AGE AND OVER  
BY MIGRATION TYPE, CANADA AND REGIONS, 1965

REGION	Population	Migrants 1964-1965		From Abroad	Out Migrants
		Intra- regional	Inter- regional (thousands)		
Atlantic Provinces.....	1,275	57	13	*	25
Quebec.....	3,828	142	22	22	29
Ontario.....	4,649	217	53	48	40
Prairie Provinces.....	2,222	124	28	14	40
British Columbia.....	1,252	68	33	12	15
CANADA.....	13,226	608	149	100	149

\* <10,000.

SOURCE: DBS, *Geographic Mobility in Canada, Oct. 1964-Oct. 1965*, Special Labour Force Studies, No. 4, April 1967, Table 2-A, p. 8.

The high rate of population mobility is apparent. It is also clear that the bulk of the migrants moved within the same region, no doubt primarily because of the distance factor, but also, especially in the case of Quebec, for social and cultural reasons. The very important role of immigration from abroad in meeting labour demands, particularly in Ontario and Quebec, is obvious. In the following sections we discuss the urban implications of internal and international migration.

### c) *Urban Implications of Internal Migration*

#### (i) MIGRATION PATTERNS

A comprehensive study of migration in Canada has been published recently by DBS.<sup>14</sup> This section will draw heavily on their findings.

Inter-regional net migration is highly responsive to the economic pressures we have referred to.

"The provinces that enjoyed the highest levels of income, modernization and economic growth in recent decades (Ontario, British Columbia and Alberta) were the only ones sustaining net gains in the 1956-61 five-year migration; the provinces that had the highest concentrations of work force in primary activities had the sharpest net losses. . . ."<sup>15</sup>

If economic factors are the chief explanatory variables of migration, the foci of economic activity—the major urban areas—should be the main destination of such migration. This was indeed found<sup>16</sup> to be the case.

"Among the selected urban size groups, the 100,000 and over group was most favoured as a destination for five-year emigrants, even after the concentration of 1956 population in this size group is taken into account."<sup>16</sup>

<sup>14</sup> L. O. Stone, *Migration in Canada: Regional Aspects*, DBS, 1961 Census Monograph, 1969.

<sup>15</sup> *Ibid.*, p. 10. See also pp. 14-15.

<sup>16</sup> *Ibid.*, p. 11.

This finding has profound implications for explaining mobility. The relevant spatial unit in the migration flow is the city. It serves to attract migrants because of its employment potential. The role of the province as a spatial unit is largely derivative; it is a function of its urban structure.

"... the presence of a large urban agglomeration or metropolitan area significantly affects a region's retentive power upon population. . . ." <sup>17</sup>

It is true that intra-provincial migration flows exceed inter-provincial migration (by four to one, 1956-1961<sup>18</sup>), but this can be explained largely by the distance factor.<sup>19</sup> Migrants move to jobs but face some distance impediments that naturally bear a relationship to provincial boundaries. Thus, provinces play a relatively passive role in explaining migration flows; the urban structure is central here. Any attempt to analyze and deal with provincial demographic trends that ignores the central role of the urban unit will be based on totally inappropriate assumptions.

The data support several deductions we have made in Chapter 1. The economic importance of the larger urban centres, particularly those achieving sustained growth, has been stressed. We would therefore expect them to dominate migration patterns; and as we have already seen, this has been the case.

One interesting sidelight emerges. As rural areas decline towards some limit, this important source of urban population tends to dry up. The major flows then must be within the urban system.<sup>20</sup> If our hypothesis about the central role of the major centres is valid, the inter-urban flow must be from smaller to larger units.

"For the future, the most significant internal migration flows will be among urban centres, and the streams involving the large urban agglomerations and metropolitan areas will be particularly important."<sup>21</sup>

In other words, our analysis of the urban system *qua* system, inherently linked to the nation's economic structure, appears to be fully substantiated by this evidence. The main flows are to urban centres, and because of their growing relative attractiveness, primarily to the largest centres.

In addition, higher-than-average levels of education and occupational skills are shown for the migration streams involving metropolitan areas, relative to both source and destination populations and alternative flow patterns.<sup>22</sup>

To summarize these conclusions, it is worth quoting Stone at length:

"Over the 1941-51 decade, Canada underwent rapid structural changes highlighted by the decline of primary activities and the growth of manufacturing, sales and services. The rapidly growing economic sectors were spatially concentrated in certain regions of Canada, and these regions had thus unusually

<sup>17</sup> *Ibid.*, p. 58 and Chapter 8.

<sup>18</sup> *Ibid.*, p. 57.

<sup>19</sup> *Ibid.*, p. 16.

<sup>20</sup> "Rural-urban flows were dwarfed by urban-urban flows in the 1956-61 period." *Ibid.*, p. 66.

<sup>21</sup> *Ibid.*, p. 58.

<sup>22</sup> *Ibid.*, pp. 12-13.

large increases in the economic opportunities that attract migrants . . . the 1951-61 decade saw a continuation of (these) trends. . . . Among the counties or census divisions, the major relevant shifts probably involved the decline of agriculture, and advances in urbanization, manufacturing and tertiary activity. In regard to the urban complexes, the major relevant shifts probably involved the degree of increase in the performance of metropolitan functions, which spurred the demand for a more highly educated and professional work force, and pushed specialization in activities like wholesale trade, business and financial services."<sup>23</sup>

A final intra-metropolitan process, that relates to our concern with the poor, has been documented.

" . . . the result of the migration into and out of the MA (Metropolitan Area) was a net loss to the central city and a net gain to the ring."<sup>24</sup>

But the real concern is less with size than with composition of the population.

" . . . the net effect of this redistribution was to raise the levels of educational and occupational skills in the ring and to lower it in the central city . . . the redistribution tended to increase the proportion of married persons in the ring and lower it in the central city."<sup>25</sup>

## (ii) MOBILITY AND MIGRATION

Some further analysis of migration and its relationship to employee changes in industry and occupation can be made on the basis of unemployment insurance records. The basic data are summarized in *Table 14*.

*Table 14*

### PERCENTAGE OF JOB CHANGES BY TYPE, 1952-1960

<i>Mobility Variable</i>	<i>1952-1956</i> %	<i>1956-1960</i> %
<i>One Variable</i>		
Occupation.....	42.0	44.3
Industry.....	15.0	16.4
Location (UIC Local Office).....	5.0	6.1
<i>Two Variables</i>		
Occupation and Industry.....	24.0	19.3
Industry and Location.....	3.0	3.4
Occupation and Location.....	3.0	3.0
<i>All Three Variables</i>		
Occupation and Industry and Location.....	8.0	7.5
TOTAL.....	100.0	100.0
% Involving Location.....	19.0	20.0

SOURCE: 1952-1956, DBS, *Canadian Statistical Review*, July 1960.

1956-1960, DBS, *Canadian Statistical Review*, November 1961.

<sup>23</sup> *Ibid.*, p. 19.

<sup>24</sup> *Ibid.*, p. 13.

<sup>25</sup> *Ibid.*, p. 14.



In both periods, about half of all persons in the sample changed jobs *each year*. Obviously most changes were in occupation, largely within the same firm, and hence industry and location. One-fifth of all job changes, however, entailed changes in location, indicating a high degree of responsiveness to economic opportunities despite the substantial costs of moving. The evidence also suggests a relationship of mobility to unemployment: the lower the rate of unemployment, the greater the total mobility. This, of course, reflects the importance of demand conditions. On the supply side, the unemployed show much higher mobility rates than the employed, particularly with respect to locational mobility.<sup>26</sup>

There appears, therefore, to be much potential responsiveness of labour to changing economic conditions. This extends to locational change as well. In line with Stone's findings, moves tend to favour nearer areas rather than farther ones.<sup>27</sup> Further, the young are the most mobile, as are males relative to females.<sup>28</sup> The result is a continual drift of the "best" workers to the best jobs—a result that permits the continual healthy expansion of the national economy but which has serious implications for the losing areas.

### (iii) THE URBAN SITUATION OF INTERNAL MIGRANTS

The problems of adjustment for migrants to urban areas from elsewhere in Canada have not been analyzed as thoroughly as those of immigrants from abroad. Presumably it is assumed that internal migrants are socially and culturally more similar to their new urban neighbours than are immigrants. This may not be the case, however. Immigrants to Canada must meet certain skill requirements, and so the incoming flow is screened; internal migrants undergo no such screening process. One need only reflect upon the serious urban problems of native peoples, or of rural migrants,<sup>29</sup> to be aware that "citification" may be a much greater ordeal for them than for formerly urbanized, highly educated, skilled immigrants from the United Kingdom, the United States, and other countries.

In their study, Charbonneau and Légaré indicate that internal migrants in Quebec located typically in the east end of Montreal, the lowest income district of the city. Foreigners tended to locate in the downtown area, while migrants from other provinces located relatively more frequently in the west end.<sup>30</sup> In contrast to Toronto, the proportion of foreign migrants was quite small (*Table 15*). The effect of internal migration to Montreal thus appears to be an exacerbation of a low-income situation in the poorest areas. These conclusions are, of course, highly speculative, and it is recommended that serious research into the general situation of internal migrants be undertaken, particularly in the light of Stone's general findings on the rapidly changing source of internal migrants.

<sup>26</sup> DBS, "Unemployment as a Factor in Labour Mobility", *Canadian Statistical Review*, April 1962.

<sup>27</sup> DBS, *Canadian Statistical Review*, July 1960.

<sup>28</sup> *Ibid.*

<sup>29</sup> For a limited but in-depth analysis of the problem, see Jane A. Abramson, *Rural to Urban Adjustment*, ARDA Project No. 37003, Ottawa, May 1968.

<sup>30</sup> H. Charbonneau and J. Légaré, "L'extrême mobilité de la population urbaine au Canada", *Revue de Géographie de Montréal*, pp. 248-250.

*Table 15*  
 RÉPARTITION DE LA POPULATION URBAINE EN 1961  
 SELON LE GENRE DE MOUVEMENT ENTRE 1956 ET 1961

	Canada	Québec	Ontario	Montréal		Toronto		Vancouver		Québec	
				z.m.	ville	z.m.	ville	z.m.	ville	z.m.	ville
Population urbaine totale	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
âgée de 5 ans et plus....	48.3	48.5	48.5	42.7	42.9	44.3	44.4	47.2	50.1	55.7	55.6
n'ayant pas changé de											
logement.....											
ayant changé de											
logement.....	51.7	51.5	51.5	57.3	57.1	55.7	55.6	52.8	49.9	44.3	44.4
au Canada même.....	47.8	49.0	45.9	53.1	52.1	47.1	43.8	47.9	43.8	43.7	43.9
dans la même ville....	30.2	32.4	29.9	—	45.3	—	34.2	—	32.9	—	37.0
d'une municipalité											
à l'autre.....	17.6	16.6	16.0	—	6.8	—	9.6	—	10.8	—	6.9
dans la même											
province.....	13.5	14.6	12.7	—	5.2	—	6.7	—	5.4	—	6.5
d'une province											
à l'autre.....	3.9	1.8	3.1	2.3	1.4	2.7	2.7	6.1	5.3	0.6	0.4
d'un lieu indéterminé	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0
de l'étranger.....	3.9	2.5	5.6	4.2	5.0	8.6	11.8	4.9	6.1	0.6	0.5

SOURCE: H. Charbonneau and J. Légaré, *op. cit.*, Tableau 2, p. 239.

#### (iv) SOME IMPLICATIONS OF INTERNAL MIGRATION

These trends raise some thorny policy problems. On the one hand, those who move are the most employable; they are typically skilled and young. They are also severely underemployed in their source location. Thus, they are no doubt better off as a result of the move. The area to which they move also is improved, because its labour requirements are met and further expansion is made possible. In addition, the general quality of the population in the main receiving urban centres is upgraded.

On the other hand, this process incurs two obvious costs. One is the whole problem of urban expansion to which we have already referred. The second is the relative deterioration in the average quality of the population in the supplying areas. But to what extent is the latter a real issue? First, it is true in a spatial sense that the area is worse off. But the remaining population is not necessarily so. Indeed if those who leave were unemployed, the area probably realizes a net reduction in welfare costs. It is also true that the potential for rapid industrialization is diminished if the "best" employees go. But their presence in the area by itself will not stimulate development. The region must possess, in addition, certain economic potential in terms of access to markets, capital, and technology; and in particular, it must provide the necessary urban system within which these variables can be made to interact efficiently. For many regions, the potential is not there, nor will it be in the foreseeable future. For some, careful planning of urbanization-cum-industrialization might lead to successful economic development. Even here, though, results cannot be guaranteed; for this development will depend ultimately on the overall development of the Canadian economy—new urban structures must be linked with those already in operation. To the extent that migration assists national development, the expansion of the overall urban system is furthered, making feasible the steady growth of immature units. Attempts to develop isolated urban units cannot succeed because they are not viable by themselves; their success is dependent upon the prosperity of the whole urban system.

Again, we emphasize the need to understand the centrality of the urban system. This time the context is the non-urban areas, but their chief aim—to become economically viable—must be considered within the realm of the attainable. It appears that much of the concern over migration from these areas is unfounded, and following through on policies to retard migration might impose the greatest costs on the regions that express the deepest concerns.<sup>31</sup>

### d) *Urban Implications of International Migration*

#### (i) THE URBAN ORIENTATION OF MIGRANTS

Data recently assembled by the Department of Manpower and Immigration permit us, for the first time, to discover the intended urban destination of immigrants to Canada.

<sup>31</sup> For the opposite view, see D. J. McDonald, *Population Migration and Economic Development in the Atlantic Provinces*, Research Paper No. 6, Research Council, Atlantic Provinces Economic Council, Fredericton, March 1968.

In 1968, over one-half of all immigrants intended to settle in the three largest metropolitan areas of Canada—Montreal, Toronto, and Vancouver. In the light of the fact that these centres held one-quarter of the Canadian population, the large-city orientation of the migrant flow is readily seen. Indeed, 75% of all immigrants were destined for nine of the largest cities in Canada in that year.

In addition to the big-city direction of this flow, there is some evidence that the rate of growth of particular cities is related to immigration. Thus, Toronto, which has been growing more rapidly than Montreal, attracted almost twice as many immigrants.

Table 16

## IMMIGRATION AND MAJOR URBAN CENTRES, 1968

CENSUS METROPOLITAN AREA	CMA Population (000)		Average Annual Growth Rate 1966-68	Immigrants* Destined for (1968)	% of all Immigrants	Immigrants in 1968 as % of 1968 CMA Pop.
	1968	% of Total Pop.				
				(000)		
Montreal.....	2,527	12.2%	1.8%	28.8	15.7%	1.1%
Toronto.....	2,280	11.0%	2.8%	53.8	29.2%	2.4%
Vancouver.....	955	4.6%	3.5%	13.4	7.3%	1.4%
Ottawa.....	518	2.5%	2.3%	4.6	2.5%	0.9%
Hamilton.....	471	2.3%	2.5%	5.3	2.9%	1.1%
Edmonton.....	425	2.1%	3.0%	5.1	2.8%	1.2%
TOTAL: 6 cities.	7,176	34.7%		111.0	60.4%	1.5%
Rest of Canada..	13,522	65.3%		73.0	39.6%	0.5%
TOTAL: Canada	20,698	100.0%		184.0	100.0%	0.9%

\* The close correspondence between intended and actual destination for the first three months of 1969 makes the use of these intentions data valid.

The ratios of actual to intended were as follows: Montreal 92%; Toronto 108%; Vancouver 102%; Ottawa 91%; Hamilton 122%; and Edmonton 93%.

This actually adds to the polarization in Toronto of the immigration flow.

SOURCE: Department of Manpower and Immigration, supplementary Table 3.

## (ii) THE IMPACT ON URBAN GROWTH

The result of these trends is that immigration has been an important factor in urban demographic growth. Immigration amounted to more than half of the net growth in population in most centres, with the proportion in Toronto and Montreal being particularly high.

In addition to the urban specificity of the overall immigration flow, we observe that the flow to the largest cities is relatively labour intensive, giving them an even greater share of the productive immigrant population. Thus, whereas the three largest metropolitan areas absorbed 52% of total immigration in 1968, they claimed 55% of the immigrant labour force. Since the other large urban centres had about the same share of immigrant population and labour force, by implication the less urbanized areas had relatively more non-productive dependents, further augmenting economic disparities between these areas. From this we can infer that those provinces which lack major urban centres benefitted substantially less from the migration flow than did the wealthier urbanized provinces.



Table 17  
OCCUPATIONAL MIX OF IMMIGRANTS, MAJOR URBAN AREAS FIRST THREE MONTHS, 1969

OCCUPATION	All Immigrants	Biggest Three <sup>1</sup> Metropolitan Areas		Biggest Ten <sup>2</sup> Metropolitan Areas		All Other Areas <sup>3</sup> % of Total in Occupation
		No.	% of Total in Occupation	No.	% of Total in Occupation	
Managerial.....	430	226	53	274	64	36
Professional and Technical.....	5,232	2,571	49	3,618	69	31
Clerical, Sales, Service						
Transport and Communication.....	5,092	3,074	60	3,764	74	26
Primary Industries.....	912	181	20	261	29	71
Craftsmen and Labourers.....	5,321	3,052	57	3,954	74	26
Other.....	77	36	47	46	60	40
Total Labour Force.....	16,764	9,176	55	11,953	71	29
Non-Labour Force.....	14,024	6,451	46	8,643	62	38
Wives.....	5,147	2,483	48	3,262	63	37
Children.....	6,903	3,043	44	4,194	61	39
Retired.....	1,118	510	46	633	57	43
Students and Other.....	856	415	48	649	76	24
Total Immigration.....	30,788	15,591	51	20,560	67	33

<sup>1</sup> Montreal, Toronto and Vancouver.

<sup>2</sup> In addition, Quebec, Hamilton, Ottawa, Edmonton, London, Winnipeg, and Calgary.

<sup>3</sup> Exclusive of the ten biggest metropolitan areas.

SOURCE: Special Tabulation No. 13, Department of Manpower and Immigration.

A second set of estimates adds another dimension to the city-selectivity of immigrants. A sample for the first three months of 1969 reveals that the largest metropolitan areas received not only a relatively greater share of the labour force than of total immigration, but within that labour force, a high proportion of clerical and service workers and craftsmen and labourers. For the non-metropolitan areas, there was a high incidence of workers in primary industries. As for the non-labour force component of the immigration flow, the metropolitan areas showed a high incidence of future productive labour, particularly college students, while the non-metropolitan areas contained a disproportionate number of retired persons with zero productive potential.

On the basis of this evidence, we would conclude that the single most important facet of the immigration process is its strong metropolitan orientation. This has had two effects, one a benefit and the other a cost. The benefit is that the quality of this metropolitan flow has been relatively higher than the non-metropolitan flow, measured in terms of labour productivity. This must be qualified by the cost, which is the substantial augmentation to the metropolitan growth rate that this flow has induced, aggravating the serious urbanization problems that we have already noted. The net outcome for these metropolitan areas cannot be ascertained at present.

### (iii) THE URBAN SITUATION OF IMMIGRANTS

While we have identified several of the parameters indicative of the impact of immigration on Canada's urban system, it remains for us to examine the urban condition of these immigrants. Regrettably, the amount of information we have is incomplete and precludes cross-city comparisons. Some data have been assembled for Montreal and Toronto, and we include them for two reasons: first, these cities account for almost half of all immigrants; and second, the socio-economic hardships of immigrants in these major metropolitan areas are probably worse than anywhere else.

For Montreal, we have graphic material which permits us to associate the residential location of immigrants with household income zones in that city. It is clear from *Figure 3* that the densest area of immigrant residency is the central city, that part of the city where the lowest levels of income are found.

For Toronto, there is much more evidence not only on the location of immigrants, but also on their socio-economic status, housing conditions, and so forth.<sup>32</sup>

For housing, it was found that apartment dwelling was most characteristic of immigrants who arrived between 1956 and 1961. Natural born Canadians and pre-war immigrants were most likely to live in single detached dwellings, and immigrants in the central city who arrived between 1946 and 1955 were most likely to be living in single attached dwellings.

As for the quality of housing, a quarter of all post-war immigrant households in Toronto were sharing bath and toilet facilities. This compares with an overall city average of less than 10%, and suggests that the bulk of low-quality housing

<sup>32</sup> Much of this work has been conducted by the Institute for Behavioural Research, Ethnic Research Programme, York University, under Anthony H. Richmond.

Figure 3

## IMMIGRANTS BY ZONE, MONTREAL



Zone No.      % of the Pop. from Abroad

1	6.9%
2	11.2%
3	1.1%
4	2.5%
5	7.7%
6	4.0%
7	3.4%
8	2.8%
9	1.9%
10	1.7%
TOTAL	4.2%

SOURCE: H. Charbonneau and J. Légaré, *op. cit.*, Figure 1, p. 240 et Tableau 6, p. 251.

Table 18  
DWELLING CHARACTERISTICS  
IN METROPOLITAN TORONTO, 1961

a) Amenities	Pre-War Imm. %	1946-1961 %	Other Canadians %	Total %
Running Water.....	99.57	99.80	99.47	99.56
Flush Toilet.....	89.89	85.28	91.61	89.83
Bath or Shower.....	92.23	86.43	94.23	92.06
Furnace.....	96.87	97.35	97.18	97.25
Refrigerator.....	97.94	98.79	98.69	98.56
Home Freezer.....	5.74	4.58	9.87	7.83
Television.....	91.86	87.61	93.25	91.69
Car.....	62.62	70.03	77.84	72.95
b) Type of Housing				
Single Detached.....	59.47	43.88	59.11	55.75
Single Attached.....	19.53	24.60	13.93	17.49
Flat or Apartment.....	20.99	31.45	26.83	26.67
Owned.....	77.73	61.87	65.95	67.45
Rented.....	22.27	38.13	34.05	32.55
Reporting a Mortgage.....	27.88	32.84	37.97	34.72
No. of Households.....	99,106	108,943	274,441	482,940

SOURCE: Anthony H. Richmond, *Immigrants and Ethnic Groups in Toronto*, op. cit., Tables 33 and 34, p. 57, from 1961 Census of Canada.

was occupied by this group. The fact that Toronto's share of families not maintaining their own household is twice as high as the national average and the metropolitan average further supports this view.<sup>33</sup>

Some evidence regarding this is contained in Richmond's statistical study.<sup>34</sup> These are summarized in Table 18.

The relative lack of flush toilets and bath and shower facilities for post-war immigrants is readily seen, although for other items, such as furnace, refrigerator, and running water, this group scores slightly higher than both pre-war immigrants and other Canadians. One important lack is cars, but even this group is in a better position than pre-war immigrants. As for types of housing, the apartment orientation and consequent rental status is clearly seen.

It is not necessary to draw the conclusion that Dr. Richmond does, however—namely, that “this is indicative of the seriousness of the housing shortage for this section of the population”.<sup>35</sup> Sharing of facilities is an economical way for newly arrived immigrant households to minimize their expenditure on housing, thereby enabling them to accumulate savings for later acquisition of their own homes. This transition-easing pattern of behaviour is highly rational, and the all-too-easy inference that those behaving in this way are bearing a heavy toll in terms of the “social effects and human implications”<sup>36</sup> may lead to inappro-

<sup>33</sup> CMHC, *Canadian Housing Statistics, 1968*, Table 101, p. 73.

<sup>34</sup> Anthony H. Richmond, *Immigrants and Ethnic Groups in Metropolitan Toronto*, York U., June 1967.

<sup>35</sup> *Ibid.*, p. 8.

<sup>36</sup> *Ibid.*, p. 10.



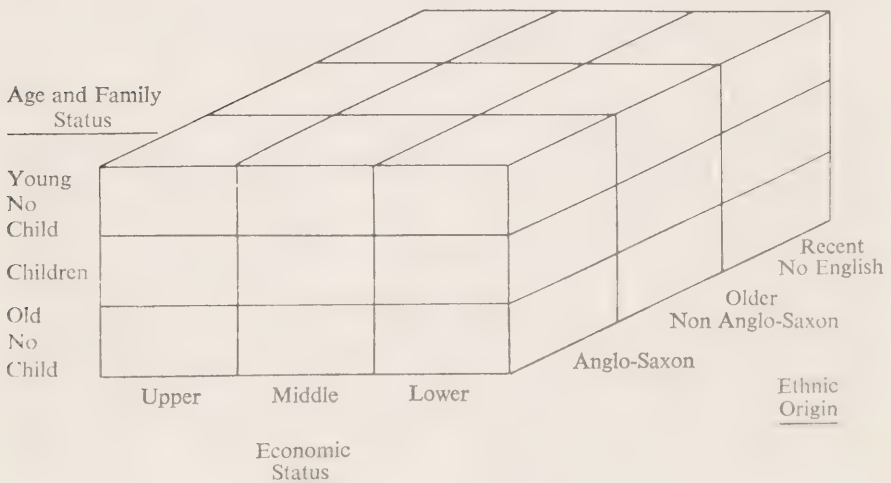
priate policies. There is some evidence that several urban renewal schemes, responding to the data with little awareness of the process, have destroyed a highly functional component in the urbanization process.

Despite this qualification, Richmond does provide evidence about the housing market in Toronto that has direct application to immigration, and also has wider applicability to our whole housing market discussion. His evidence suggests that the housing market in Toronto is not homogeneous but is clearly stratified into a number of largely independent markets. This means that there may be a surplus of housing in one sector of the market which is useless in overcoming shortages in another. The implications for the filtering process are obvious.

The primary variables of classification and their components are illustrated in *Figure 4*.

*Figure 4*

#### TORONTO HOUSING SUB-MARKET CLASSIFICATION



The variation in some of these components can be obtained, and these are presented in *Table 19*.

There appears to be a sharp distinction in earnings by period of immigration and by age group, categorized in line with the "age and family status" variable of classification in *Figure 4*. Spatial differentiation among immigrant groups is seen in *Table 20* where there are a clear concentric variation in income distribution within ethnic groups and clear variations within concentric zones among ethnic groups. In other words, both ethnicity and income influence the housing choice of immigrants, creating complex sub-markets along the lines hypothesized above.

Table 19

## EARNINGS BY YEAR OF IMMIGRATION AND AGE, TORONTO, 1961

Age of Post-War Immigrants—Family Head	Average Earnings of Head		Average Family Earnings	
	Total Labour Force	Post-War Immigrants	Total Labour Force	Post-War Immigrants
Under 25 years.....	\$4,487	\$3,006	\$4,537	\$4,136
25-34 years.....	4,440	3,835	5,295	4,770
35-44 years.....	5,005	4,241	5,869	5,239
45-54 years.....	5,071	3,941	6,610	5,693
55-64 years.....	4,662	3,470	6,203	5,297
Over 65 years.....	3,464	2,829	4,760	4,078
All ages.....	4,729	3,932	5,831	5,082

SOURCE: Anthony H. Richmond | *Immigrants and Ethnic Groups in Toronto, op. cit.*, Table 32, p. 56.

Table 20

## PERCENTAGE WITH INCOME OF \$3,000 OR MORE BY DISTANCE FROM CITY CENTRE, MALES IN LABOUR FORCE, SELECTED MOTHER-TONGUE AND BIRTHPLACE GROUPS, METROPOLITAN TORONTO, 1961

MOTHER TONGUE							
Zone <sup>1</sup>	Total	English	German	Italian	Polish	Ukrainian	Other
1	41	46	53	32	38	41	32
2	58	64	61	36	57	59	54
3	65	68	77	46	68	67	63
4	74	75	77	57	80	78	73
5	77	77	79	66	79	78	76

BIRTHPLACE									
Zone <sup>1</sup>	Total	Canada	U.K.	U.S.	Germany	Italy	Poland	U.S.S.R.	Other
1	41	45	49	51	49	31	39	39	32
2	58	63	65	69	59	36	59	61	50
3	65	68	69	78	69	46	70	70	60
4	74	75	76	83	75	56	76	76	72
5	77	77	77	83	79	62	81	39	75

<sup>1</sup> To derive zones: Metropolitan Toronto was divided into five distance zones, radiating from the city centre (Queen and Yonge intersection). The first zone consists of that area within a three-mile radius of the centre; the second, third, and fourth zones are each four miles wide; the fifth zone is made up of the rest of the metropolitan area (the most peripheral part).

SOURCE: Wilfred G. Marston, "Social Class Segregation within Ethnic Groups in Toronto", *Canadian Review of Sociology and Anthropology*, 6 (2), 1969, Table VII, p. 77.

Some final sample results obtained by Richmond are worth noting. Among post-war immigrants, those going to Toronto were found to fill relatively more non-manual occupations than immigrants going elsewhere, and relatively fewer skilled and semi-skilled occupations.<sup>37</sup>

<sup>37</sup> *Ibid.*, Table 25, p. 50.

The Toronto immigrants, however, found jobs substantially slower than the rest during the first month in Canada, although after one month they had caught up.<sup>38</sup> In addition, the unemployment rate among immigrants to Toronto was substantially higher than among other immigrants.<sup>39</sup> No doubt these economic pressures on migrants to Toronto go a long way in explaining their relatively greater dissatisfaction with Canada (see *Table 21*).

*Table 21*

POST-WAR IMMIGRANTS IN CANADA, 1961  
GENERAL SATISFACTION WITH LIFE IN CANADA

	<i>Dissatisfied</i>	<i>Moderately Satisfied</i>	<i>Very Satisfied</i>	<i>Not Satisfied</i>	<i>Total No.</i>	<i>%</i>
Metropolitan						
Toronto.....	24.0	52.0	21.0	3.0	93	100
Rest of Canada...	13.0	42.0	43.0	2.0	385	100
Total.....	15.0	43.0	40.0	2.0	478	100

SOURCE: Anthony H. Richmond, *op. cit.*, Table 43, p. 70.

(iv) CONCLUSION

We have, then, a crude overview of the interaction between immigration and urbanization. Immigration has had a strong urban focus, and has supplied the largest urban centres with a relatively better quality labour force than the smaller centres and the rural areas. The problems of the urban immigrant appear to be substantial, however. Low quality of housing, residential segregation, lower income, all go towards making the urban immigrant relatively dissatisfied. How much of this situation is transitory, to be resolved as the migrants merge into the mainstream of the urban development process, is not known. The study of cohorts of migrants by the Department of Manpower and Immigration should provide us with a factual basis by which to assess the extent to which these problems are part of an adjustment process, and the extent to which they tend to persist.

<sup>38</sup> *Ibid.*, Table 30, p. 54.

<sup>39</sup> *Ibid.*, Table 33, p. 55.

## C. THE CANADIAN URBAN SYSTEM

### a) *Hierarchy*

An increasing quantity of data has been accumulated in the attempt to discover the properties of the Canadian urban system. Since much of the work has been done by geographers, the emphasis has been on hierarchy along the lines of Central Place analysis.<sup>40</sup> The technique of factor analysis has been used to categorize further the components of the urban system.<sup>41</sup> Other structural measures also have been introduced. One that applied the rank-size rule to sub-sectors of the urban system obtained reasonably positive results.<sup>42</sup> Another of particular interest related the urban system to the growth process in Quebec and Ontario.<sup>43</sup> It was found that the contrasts in growth performance between these regions were largely attributable to the nature of their respective sub-systems of cities. The stability of the urban system over time is clearly illustrated in *Table 22*.

A non-technical summary paper on the structure of the Canadian urban system has been prepared by Professor Donald Kerr. He clearly demonstrates the key role of the largest centres in the urban system, with particular emphasis on their economic dominance.<sup>44</sup>

Much of this analysis has been based on geographical concepts of structure. We have already suggested that the material on economic structure has not yet been developed to a sufficiently sophisticated state.<sup>45</sup> Some evidence for Montreal

40 D. Michael Ray, *op. cit.* See also J. W. Maxwell, "The Functional Structure of Canadian Cities: A Classification of Cities", *Geographical Bulletin*, Vol. 7, 1965, pp. 79-104.

41 Leslie J. King, "Cross Sectional Analysis of Canadian Urban Dimensions: 1951 and 1961", *The Canadian Geographer*, Vol. X, 4, 1966.

42 J. B. Davies and L. S. Bourne, *Behaviour of the Ontario-Quebec Urban System: City Size Regularities*, Research Report No. 2, Centre for Urban and Community Studies, U. of Toronto, September 1968.

43 Leslie J. King, "Discriminatory Analysis of Urban Growth Patterns in Ontario and Quebec", *Annals of the Association of American Geographers*, 57, September 1967.

44 Donald P. Kerr, *op. cit.*

45 See Section B (a).



Table 22

## STABILITY OF THE CANADIAN URBAN SYSTEM

1851	1901	1941	1966	Rank by Population
MONTREAL	(79.7)	Montréal	(1193.2)	1
QUEBEC	(45.5)	Toronto	(865.7)	2
TORONTO	(30.8)	Vancouver	(338.3)	3
ST. JOHN'S	(30.5)	Winnipeg	(302.0)	4
SAINT JOHN	(23.7)	Hamilton	(224.7)	5
HALIFAX	(20.7)	Ottawa	(208.9)	6
HAMILTON	(17.6)	Edmonton	(196.7)	7
KINGSTON	(11.6)	Windsor	(128.6)	8
		EDMONTON	(124.9)	9
		CALGARY	(111.6)	10
		WINNIPEG		
		VANCOUVER		
		Halifax		
		St. John's		
		KITCHENER		
		SYDNEY-		
		GLACE BAY		
		VICTORIA		
		WINDSOR		
		Kingston (rank 16)		
		Halifax	(98.6)	11
		London	(97.2)	12
		Sydney-		
		Glace Bay	(96.7)	13
		Kitchener	(82.8)	14
		Victoria	(81.0)	15
		Saint John	(70.9)	16
		St. John's	(60.9)	17
		REGINA	(58.8)	18
		LAKEHEAD	(56.3)	19
		TROIS RIVIERES	(56.3)	20
		Kingston (rank 30)	(34.8)	21
		London	(207.4)	22
		Halifax	(198.2)	23
		Kitchener	(192.3)	24
		Victoria	(173.5)	25
		Regina	(131.1)	26
		SUDBURY	(117.1)	27
		SASKATOON	(115.9)	28
		ST. CATHARINES	(109.4)	29
		CHICOUTIMI-		
		JONQUIERE	(109.1)	30
		Sydney-		
		Glace Bay	(106.5)	31
		Saint John	(101.2)	32
		St. John's	(101.2)	33
		OSHAWA	(100.3)	34
		Lakehead	(99.5)	35
		Trois Rivières	(94.5)	36

SOURCE: James and Robert Simmons, *Urban Canada*, Copp Clark, 1969, Table 3.4, p. 58.

Data received from Dominion Bureau of Statistics, *Census of Canada*, various years.

and Toronto has been accumulated, indicating that much more useful work can be done in this area.<sup>46</sup>

Despite the primitive state of much of this research, it is safe to conclude that Canadian cities do form a structural pattern that is reasonably stable, and that within it they are functionally interdependent.

b) *Connectedness*

On the question of flows in the urban system, which provide the essential links in the system, research is at a very preliminary stage. Some evidence on the major migratory patterns was presented in Section B (c) above. This indicated very strong inter-urban links, with a dominant role played by the major metropolitan areas. Further evidence corroborating this network dynamism is contained in airline traffic data. Using a gravity model, Kerr arrives at the following results.

Table 23

PAIRS OF CITIES WITH HIGH POSITIVE AND NEGATIVE  
RESIDUALS RESULTING FROM RELATING AIRLINE PASSENGER  
TRAFFIC TO THE  $\frac{P_i P_j}{D^{2ij}}$  RATIO

<i>High Positive Residuals in descending order of importance*</i>	<i>High Negative Residuals in descending order of importance**</i>
Toronto - Vancouver	London - Windsor
St. John's - Halifax	Sudbury - Quebec
Toronto - Winnipeg	Sudbury - St. John's
Toronto - Calgary	Sudbury - Ft. William
Toronto - Edmonton	Sudbury - Regina
Toronto - Halifax	Sudbury - Ottawa
Toronto - St. John's	Sudbury - Montreal
Vancouver - Winnipeg	Sudbury - Edmonton
Vancouver - Montreal	Ottawa - Montreal
Vancouver - Ottawa	Moncton - St. John's

\* Pairs of cities with high positive residuals define interactions exceeding those predicted for the simple relationship of population and linear distance.

\*\* Pairs of cities with high negative values are normally relatively close (London-Windsor). The low interaction that Sudbury has with other cities cannot at present be explained and should be the subject of further research.

SOURCE: Donald P. Kerr, *op. cit.*, Table 16-11, p. 545.

The connectedness among the major urban centres is clearly indicated. The author provides further evidence on the particularly strong links between the major metropolitan centres of Montreal and Toronto.

“Fragmentary data suggest that the daily movement of goods, people and messages between Montreal and Toronto is indeed substantial and by far the largest in Canada. It has been affirmed, for example, that at least 7,000 people move by highway, rail or air in either direction each day. . . .”<sup>47</sup>

<sup>46</sup> W. G. Gray, M. Jalaluddin, and F. Charbonneau, *op. cit.*

<sup>47</sup> *Ibid.*, p. 546.

The central role of these cities in the complex economic flows within the urban system is also documented. With 23% of the Canadian population in 1966,<sup>48</sup> these two metropolitan areas accounted for 38% of value added in manufacturing—the most integrated of economic activities.<sup>49</sup> Sixty-four per cent of all cheques cleared in Canada were cleared in these two centres<sup>50</sup>—cheques again being a highly developed device for economic transactions in the urban system. Seventy-five per cent of all head office corporate assets, and 87% for financial institutions, were located in these two cities.<sup>51</sup>

Other data have been presented by Gray, Jalaluddin, and Charbonneau, that further confirm this picture of polarization with substantial flows between the key nodes, and from them to the rest of the urban system and back.

Indeed, the Toronto-Montreal corridor (*Figure 5*) is usefully seen as the most highly developed component of the Canadian urban system. The urban centres in this area contained eight million persons in 1966, or more than 40% of the Canadian total.<sup>52</sup>

*Figure 5*

### THE TORONTO-MONTREAL URBANIZED AREA



SOURCE: N. D. Lea, *Transportation Corridors*, Figure 5-2, p. 26.

<sup>48</sup> *Ibid.*, p. 532.

<sup>49</sup> *Ibid.*, p. 534.

<sup>50</sup> *Ibid.*, p. 535. Nineteen metropolitan centres accounted for 97% of all cheques cleared.

<sup>51</sup> *Ibid.*, p. 537.

<sup>52</sup> See Don Ratcliffe, *Intercity Corridor Project: The Population Predictions for Study Area Cities*, Report No. 2, *Demography of the Study Area*, CTC, September 9, 1969, Part II.

Finally, the whole tenor of the Simmons' book is based on a systems concept of urban Canada that helps explain much of our urban and national development.<sup>53</sup>

In addition to the explicit flows in the urban system, there are a number that are harder to qualify but no less real. The dominance of the major centres in providing rapidly accelerating informational flows has given the nation an increasing urban view of the world. The central urban problems of the large cities, such as land scarcity and generally high urban costs, impose on the operations of most firms a higher cost structure than is necessary. Since their products flow through the urban system, all communities bear the burden of these higher costs in the metropolitan areas. The urban system, then, is linked in a complex network of flows, many of which are beneficial in that the general expansion of the major areas, by expanding the rates of flow in the network, brings the whole urban system and hence the nation along with them. But the same expansion creates costs that are just as quickly rippled through the urban system and the nation. The problems of the metropolitan areas are thus the problems of Canadian society, just as the development of those areas is central to the development of the nation.

In the next section, we examine in greater detail the workings of these major urban centres to "test" our hypotheses about the generation of urban problems.

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<sup>53</sup> James and Robert Simmons, *op. cit.*, especially Ch. 4.



## D. THE URBAN MICRO-SYSTEM

### a) *The Limited Scope of Present Research in Canada*

Analysis of the urban micro-system has been advancing rapidly in the United States, and with a rather long lag, in Canada. The result is that much more is known about the dynamics of individual cities in the States, although most of the admittedly partial evidence in Canada tends to confirm the basic trends in the U.S.<sup>54</sup>

Thus, the pressures of population increase on scarce residential land, the consequent sprawl and inflation of prices, the flight to the suburbs from the core, the pressure on transportation routes, the impact of new transit systems on land values and locational choice, the site selection procedure of new firms, changing employment location, and so forth, have all been documented. No overall integration of these individual components into an "urban model" has been feasible as yet, partly as a result of discouraging data limitations, and also because of the very great analytical difficulties in handling a multi-dimensional system. This is regrettable, because the urban unit contains so many recursive mechanisms that judgements based on simple relationships may be inappropriate when all second round effects are transmitted through the mechanism. Some evidence of this phenomenon is contained in the purely deductive approach of Jay Forrester.<sup>55</sup> Since there is no empirical basis for his assumptions, the model remains purely illustrative. Other approaches, such as that proposed by Barbara Bergmann, using input-output mechanisms to trace through feedback effects, appear to be promising as well.<sup>56</sup>

Our findings in the research monographs are all subject to the qualification that they are based upon partial analysis. At the moment, no other approach is feasible. The need to build full urban models for the major elements of the

<sup>54</sup> For a review of the relevant literature see N. H. Lithwick and G. Paquet, *op. cit.*, Ch. 4 and 5.

<sup>55</sup> Jay W. Forrester, *op. cit.*

<sup>56</sup> Barbara Bergmann, "The Urban Economy and the Urban Crisis", *American Economic Review*, December 1969.

urban system—macro as well as micro—is sufficiently great that a major diversion of research funds to this end not only would be important in understanding the parameters of the urban system, but would be essential in devising optimal urban policy.

### b) *A Survey of Canadian Findings*

We have argued that the chief source of the urban problem is the impact of rapid growth on scarce urban land. The evidence on the operation of this key process is adequate to confirm our major hypothesis. First, there is the relationship of urban density to urban growth, which has been developed from census data (Table 24).

The relative stability of the density of the inner city in the face of rapidly increasing population is sharply contrasted with the near doubling of density in the fringe areas. This is due to the out-migration phenomenon in conjunction with the increasing cost of travel which prevents extreme sprawl, but which, in the face of further urban growth, provides the impetus for the further exacerbation of the urban problem matrix.

Table 24

LAND AREA AND DENSITY OF POPULATION IN CANADA'S FIVE LARGEST METROPOLITAN AREAS, CENSUS YEARS 1956, 1961, 1966

METRO- POLITAN AREA <sup>1</sup>	1956		1961		1966	
	Land Area <sup>2</sup>	Population	Density per Sq. Mile	Population	Density per Sq. Mile	Population
	<i>sq. miles</i>	<i>No.</i>	<i>No.</i>	<i>No.</i>	<i>No.</i>	<i>No.</i>
Montreal						
City proper	57.94	1,109,439	19,148	1,191,062	20,557	1,222,255
Fringe area	457.80	636,461	1,390	919,617	2,009	1,214,562
Toronto						
City proper	34.96	667,706	19,099	672,407	19,234	664,584
Fringe area	773.29	834,582	1,079	1,152,182	1,490	1,493,912
Vancouver						
City proper	43.33	365,844	8,443	384,522	8,874	410,375
Fringe area	465.19	299,173	643	405,643	872	481,911
Winnipeg						
City proper	30.20	255,093	8,447	265,429	8,789	257,005
Fringe area	239.54	157,439	657	211,114	881	251,754
Ottawa						
City proper	45.44	222,129	4,888	268,206	5,902	290,741
Fringe area	289.78	123,340	426	101,555	558	203,794

<sup>1</sup>Area as of 1966.

<sup>2</sup>Revised 1966 land area used for density figures for all years.

SOURCE: DBS, *Canada Yearbook*, 1968, Table 5, p. 193.

A cross-sectional study that relates space requirements to population was undertaken for Ontario municipalities. The results are summarized in the following table.

Table 25

## POPULATION-RELATED VARIABLES, URBAN ONTARIO

<i>Dependent Variable (Logs)</i>	<i>Relation to Population Size</i>	<i>Correlation Coefficient</i>
(1) Pop. Density	$= 0.348 + 0.144 \text{ Log Pop.}$	0.70
(2) Residential Area	$= 0.565 + 0.847 \text{ Log Pop.}$	0.98
(3) Gross Residential Density	$= 0.568 + 0.153 \text{ Log Pop.}$	0.72
(4) Commercial Area	$= -1.328 + 0.788 \text{ Log Pop.}$	0.95
(5) Industrial Area	$= -1.497 + 0.944 \text{ Log Pop.}$	0.93
(6) Total Developed Area	$= -0.347 + 0.856 \text{ Log Pop.}$	0.99

SOURCE: Department of Municipal Affairs, *Urban Land Use in Ontario: Areas and Intensities* Queen's Park (undated).

The high correlations on the four area variables (2, 4, 5, and 6) enable a cross-mapping procedure for easy reference. This is replicated in Figure 6. Estimated acreage for various uses can be derived simply by indicating the population of the urban area.

In addition, a positive relationship between age of city and density appears to exist for cities in the United States, with Canadian metropolitan areas displaying an almost identical pattern. This, of course, indicates the impact of continuing urbanization in the face of scarce land; the process does not halt, but leads to increasing density and the full range of associated social problems.

Much of the remaining research has tended to focus on the determinants of specific land uses in urban areas. The interdependence of population growth and residential choice has been most completely researched.<sup>57</sup> Simmons' own work on Toronto substantiates Stone's macro findings about the drift from the core to the urban fringe. Thus, from 1956 to 1961, 261,000 persons left the core of Toronto and only 216,000 persons entered the core. The gross flows are reproduced in Table 26.

Table 26

## GROSS MOVEMENT PATTERNS IN METROPOLITAN TORONTO

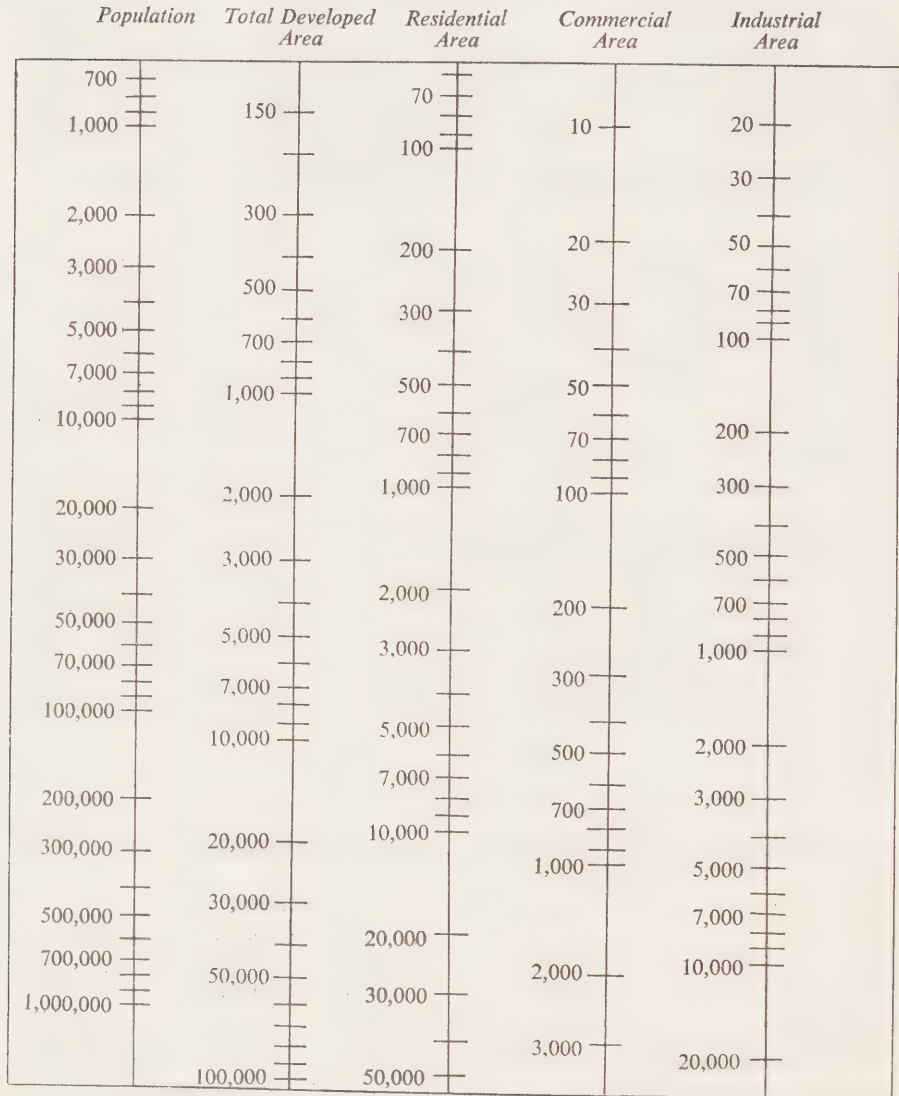
<i>ORIGIN</i>	<i>DESTINATION</i>		
	<i>Fringe</i>	<i>Central City</i>	<i>Total</i>
Fringe.....	343,500	17,900	361,400
Central City.....	63,000	197,800	260,800
TOTAL.....	406,500	215,700	622,200
1961 Population.....	1,152,100	672,400	1,824,500
1956 Population.....	834,400	667,700	1,502,100

SOURCE: James Simmons, "Changing Residence in the City: A Review of Intra-urban Mobility", *Geographical Review*, Vol. LVIII, No. 4, 1968, Table VI, p. 645.

<sup>57</sup> See James W. Simmons, *Studies of the Urban Residential Location Decision*, Ontario Institute of Studies in Education, April 1968 (mimeo).

Figure 6

## LAND USE AREAS\* IN ONTARIO'S URBAN MUNICIPALITIES

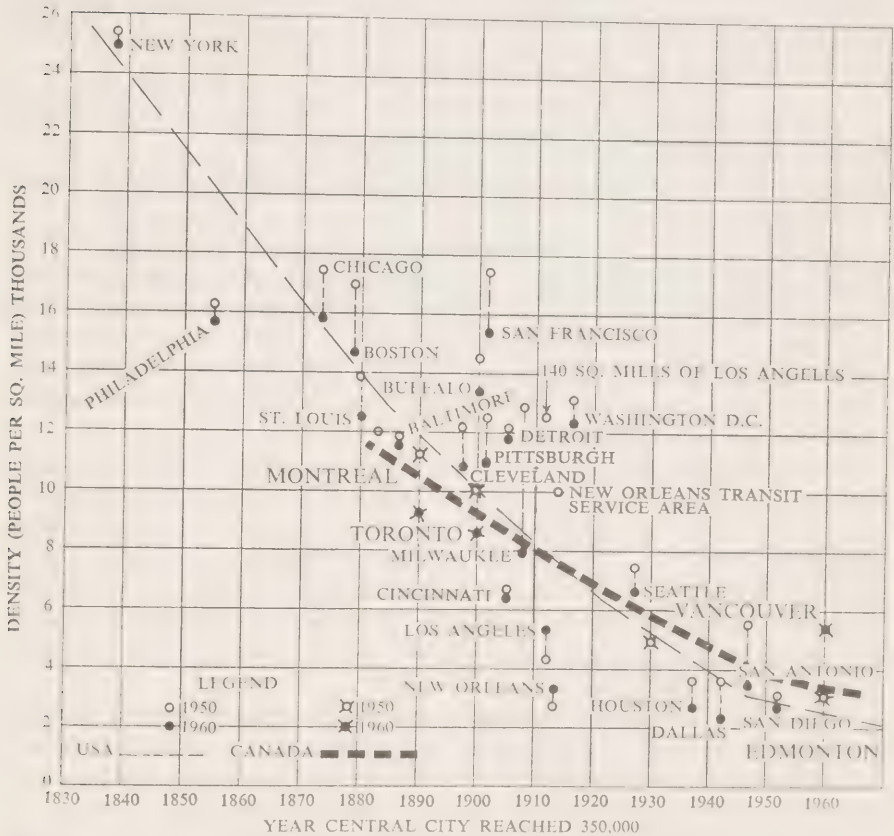


\*Areas in gross acres.

SOURCE: Department of Municipal Affairs, *Urban Land Use in Ontario*, op. cit., p. 28.



Figure 7  
EFFECT OF CITY AGE ON POPULATION DENSITY



SOURCE: N. D. Lea, *Corridor Study*, Working Paper No. 1, Figure 5, p. 12.

The role of place of work in determining residential choice has been investigated for the Vancouver region.<sup>58</sup> It is found that:

"In Vancouver . . . workers of high income live in high-cost residential areas, while workers of low income live in low-cost residential areas irrespective of the distance of these areas from centres of employment . . . commuting patterns are superimposed upon an existing spatial structure, *the determinants of which are the city's site and sequence of growth.*"

In cities with a concentric residential zonation, it may well be that high income workers commute longer distances than low income workers. The reason is to be found not in their greater ability to meet the costs of work travel, but in the nature of the residential structure itself. High cost housing is usually found on the periphery, low cost housing at the centre."<sup>59</sup>

<sup>58</sup> John R. Wolforth, *Residential Location and the Place of Work*, B.C. Geographical Series No. 4, Tantalus Research Ltd., Vancouver, 1965.

<sup>59</sup> *Ibid.*, p. 76. (Emphasis mine, N.H.L.)

This finding may appear to conflict with our argument that the poor are locked into the core by both housing and transport choice. The explanation, as we show in Research Monograph No. 1, is that the poor are not low-income workers—very few of these constitute the hard-core poor with which we are primarily concerned. This is substantiated by another study of Vancouver which finds that;

“... near the CBD, the highest concentration of single person households and the aged are found.”<sup>60</sup>

These are the poor, and the pattern in Vancouver is parallel to that in Montreal and Toronto.<sup>61</sup>

An attempt to explain modal residential choice by distance to the CBD in Ottawa yielded differing responses for different choices. Single-family land use was significantly and positively related to distance downtown—a finding which is consistent. The richer home owners would appear to be less sensitive to travel costs, largely because of their greater resources and housing preferences. For others, and particularly the lower income groups, we find that the relationship is negative, as we would expect.<sup>62</sup>

This same study examined the main determinants of non-residential land use.<sup>63</sup> Commercial use and that for retail sales showed the greatest dependence on markets with relative insensitivity to transport costs, while services showed exactly the reverse. This emphasizes the great importance of centrality to services, and the ability of sales to move closer to their markets. This “location flexibility” for retail stores was found to hold for Vancouver<sup>64</sup> and Edmonton<sup>65</sup> as well. Some more general land use studies have been developed but offer little by way of empirical findings.<sup>66</sup>

Most of these results are based on cross-sectional analysis. Several attempts have been made to discover the spatial implications of urban growth. Forecasts were obtained for projected land uses in the city of Toronto as a whole, and it might be possible to replicate these for sub-segments with adequate data.<sup>67</sup>

Thus, the evidence appears to support our view that the key process in the urban area, urbanization in the face of scarce land, does indeed contain the seeds of the urban problem. In the following part of this study, the direct effects and interdependencies are explicitly taken into account.

60 Walter G. Hardwick, Vancouver, *The Emergence of New Urban Patterns*, Department of Geography, U. of British Columbia (mimeo).

61 See Part I of this Report.

62 N. H. Lithwick and G. Paquet, *op. cit.*, Table 5-2, p. 139.

63 *Ibid.*, Table 5-3, p. 151.

64 Roger Leigh, *Specialty-Retailing: A Geographic Analysis*, B.C. Geographical Series No. 6, Tantalus Research Ltd., Vancouver, 1965.

65 J. J. Nowicki and D. A. McQuillan, “Locating Trends of Food and Beverage Industries: The Edmonton Example”, *The Albertan Geographer*, No. 4, 1968.

66 J. W. Simmons and Victor H. Huebert, “The Location of Public Land Use in Urban Areas”, *Canadian Geographer* (forthcoming).

67 L. S. Bourne, “A Spatial Allocation—Land Use Conversion Model of Urban Growth”, *Journal of Regional Science*, Vol. 9, No. 2, 1969.

## E. CONCLUSIONS

In this chapter, we have examined our theory of urbanization in the light of Canadian experience. The central aspects of our model appear to be highly relevant.

- (1) The early history of Canada played a key role in the development of the urban system.
- (2) Mature urban units have come to dominate the Canadian economy.
- (3) This dominance has shaped the structure of the urban system in terms of hierarchy and connectedness.
- (4) The evolution of the micro-system features the impact of rapid urban growth on scarce land.
- (5) The result has been the hypothesized urban sprawl and increased densities which underlie the emergence of the urban problem.





Table A-2  
EVOLUTION OF THE MAJOR METROPOLITAN AREA ECONOMIC STRUCTURE, 1931-1961

CITY	Total Labour Force		Primary Industries	Manufac- turing	Construc- tion	QUEBEC CITY			Transport- ation	Trade	Finance et al.	Services	Govern- ment	N.E.S.
						Utilities								
1931 Male	34,227		227	6,845	4,215	309	4,586		6,333	1,116	4,845	3,115	2,636	
Female	13,994		4	2,679	13	16	260		1,632	259	8,506	503	122	
1941 Male	37,207		364	9,993	5,212	417	3,347		7,292	1,029	4,285	4,599	669	
Female	18,106		17	4,432	26	26	214		2,008	348	9,844	1,039	152	
1951 Male	44,469		452	9,825	4,911	790	4,370		8,312	1,255	5,896	7,258	1,410	
Female	21,140		59	4,629	152	76	550		3,302	895	9,117	2,020	340	
1961 Male	44,043		483	7,673	4,016	505	5,784		8,541	1,429	6,941	8,424	1,241	
Female	24,652		62	3,334	107	79	715		3,661	1,279	11,447	3,394	574	
METROPOLITAN AREA														
1931 Male														
Female														
1941 Male	51,043		1,132	15,269	6,980	—	4,639		9,106	1,347	5,811	5,727	1,392	
Female	22,564		37	5,483	31	—	251		2,311	399	12,759	1,127	166	
1951 Male	70,575		2,171	17,350	8,072	1,094	7,079		12,226	1,817	8,781	9,792	2,099	
Female	30,391		139	7,034	189	87	817		4,413	1,237	15,607	2,402	466	
1961 Male	86,253		1,698	17,866	8,882	943	8,860		16,124	2,970	13,103	13,460	2,347	
Female	40,158		144	5,883	192	102	1,071		5,677	2,157	19,616	4,359	957	

*Table A-3*  
EVOLUTION OF THE MAJOR METROPOLITAN AREA ECONOMIC STRUCTURE, 1931-1961

CITY	Total		Primary Industries	Manufacturing	Construction	MONTREAL		Trade	Finance et al.	Services	Government	N.E.S.
	Labour Force					Utilities	Transportation					
1931 Male	250,480		1,881	66,131	37,565	1,802	32,895	39,129	9,689	34,680	13,562	13,248
Female	85,349		49	25,416	267	210	3,636	10,797	4,393	39,181	786	614
1941 Male	258,033		1,814	99,495	27,801	1,775	27,571	45,599	9,207	28,834	12,071	3,859
Female	104,620		27	39,621	210	238	2,663	13,529	4,261	41,826	1,474	781
1951 Male	314,682		1,194	118,336	30,562	3,182	38,166	50,789	10,930	37,959	17,199	6,265
Female	130,048		99	50,392	692	337	6,309	19,473	8,373	39,867	2,918	1,588
1961 Male	333,667		1,789	104,599	31,832	3,609	40,833	56,608	13,549	50,064	21,479	9,305
Female	161,364		107	51,496	959	591	8,104	22,618	11,386	57,389	4,343	4,371
<i>METROPOLITAN AREA</i>												
1931 Male												
Female												
1941 Male	342,081		4,620	133,516	33,732	—	36,054	58,986	13,863	37,637	15,310	8,363
Female	130,949		149	46,052	297	—	3,626	16,533	5,798	55,664	1,817	1,013
1951 Male	420,697		3,199	159,669	39,801	4,064	51,209	66,379	15,687	49,718	22,899	8,071
Female	168,454		194	61,862	857	435	8,805	24,674	11,210	54,746	3,550	2,121
1961 Male	565,967		4,971	183,157	54,768	6,067	69,067	94,094	24,407	78,557	35,788	15,084
Female	241,006		208	72,224	1,544	803	12,688	34,329	17,577	88,393	6,262	6,877

Table A-4  
EVOLUTION OF THE MAJOR METROPOLITAN AREA ECONOMIC STRUCTURE, 1931-1961

CITY	Total Labour Force	Primary Industries	Manufac- turing	Construc- tion	OTTAWA			Finance et al.	Services	Govern- ment	N.E.S.
					Utilities	Transport- ation	Trade				
1931 Male	35,077	579	5,366	3,442	371	3,565	5,927	1,470	4,927	7,934	1,496
Female	16,389	10	1,009	48	62	695	2,054	783	7,787	3,845	96
1941 Male	37,206	407	7,206	3,007	421	2,796	6,024	1,575	4,131	11,011	634
Female	23,498	7	1,710	30	58	459	2,388	1,569	8,967	8,120	190
1951 Male	57,884	765	7,597	4,614	1,013	4,157	8,561	1,836	6,343	22,350	648
Female	29,727	91	2,093	108	136	1,047	3,768	2,313	8,868	11,041	262
1961 Male	71,086	509	7,203	6,124	736	5,265	9,769	2,723	9,705	27,151	1,901
Female	40,038	63	1,945	208	150	1,413	4,915	2,768	14,569	12,933	1,074
METROPOLITAN AREA											
1931 Male											
Female											
1941 Male	60,266	1,437	14,142	5,330	—	4,013	9,591	2,119	6,306	14,664	2,664
Female	28,580	20	2,876	39	—	500	2,910	1,745	11,295	8,964	231
1951 Male	80,028	1,219	14,284	7,505	1,258	5,342	11,484	2,209	9,640	26,862	1,215
Female	36,784	127	3,302	131	151	1,198	4,907	2,615	11,147	12,799	407
1961 Male	12,534	1,625	14,839	11,466	1,227	8,062	15,594	3,815	14,212	38,836	2,858
Female	55,178	134	2,927	343	207	1,900	7,197	3,665	20,328	16,999	1,478

*Table A-5*  
EVOLUTION OF THE MAJOR METROPOLITAN AREA ECONOMIC STRUCTURE, 1931-1961

CITY		TORONTO										
		Total Labour Force	Primary Industries	Manufac- turing	Construc- tion	Utilities	Transport- ation	Trade	Finance et al.	Services	Govern- ment	N.E.S.
1931	Male	201,263	1,858	60,722	22,370	2,051	20,229	36,223	10,657	30,150	10,343	6,640
	Female	79,120	49	18,824	230	317	2,959	13,671	5,340	35,652	1,506	574
1941	Male	194,544	1,584	75,777	15,861	2,672	15,416	38,356	9,772	23,769	9,184	1,968
	Female	91,224	115	27,461	247	414	2,043	17,174	5,845	35,031	2,283	611
1951	Male	226,617	1,306	84,459	21,885	5,537	20,184	40,289	9,845	29,178	10,142	2,992
	Female	111,970	183	35,060	371	948	4,422	23,958	10,320	31,646	3,774	1,088
1961	Male	199,918	1,715	59,382	21,150	2,502	19,352	32,522	9,344	34,796	11,184	7,971
	Female	120,243	262	27,603	511	678	5,126	20,798	11,635	46,465	5,109	2,046
METROPOLITAN AREA												
1931	Male											
	Female											
1941	Male	290,302	4,811	117,360	24,066	—	22,491	56,118	14,355	32,346	12,610	6,145
	Female	111,457	173	35,094	306	—	2,546	20,602	6,991	42,236	2,742	767
1951	Male	367,533	3,688	138,812	35,701	9,173	31,823	66,859	16,823	53,144	17,712	3,798
	Female	159,295	355	50,459	968	1,467	6,522	34,247	14,902	43,642	5,286	1,447
1961	Male	529,018	7,757	170,615	49,174	8,481	47,634	96,400	27,000	76,745	31,713	13,599
	Female	260,633	963	63,896	1,881	1,768	10,818	50,096	25,338	90,977	11,245	3,651



Table A-6  
EVOLUTION OF THE MAJOR METROPOLITAN AREA ECONOMIC STRUCTURE, 1931-1961

CITY	Total Labour Force	Primary Industries	Manufacturing	Construction	HAMILTON					Finance et al.	Services	Government	N.E.S.
					Utilities	Transportation	Trade						
1931 Male	49,314	567	23,705	5,410	360	3,954	6,152	1,180	4,635	1,813	1,538		
Female	14,439	24	5,127	55	38	489	2,191	371	5,938	146	60		
1941 Male	51,816	538	30,616	3,750	583	2,902	6,753	1,105	3,700	1,430	437		
Female	18,192	35	8,342	56	61	272	2,575	455	6,057	248	91		
1951 Male	68,845	278	39,763	5,590	879	4,048	8,816	1,328	5,288	2,296	559		
Female	26,280	76	11,622	159	113	710	4,546	954	7,432	575	193		
1961 Male	75,857	581	36,706	7,419	803	4,952	10,585	1,722	8,121	3,185	1,783		
Female	32,916	139	8,666	288	137	786	6,596	1,659	13,386	860	399		
METROPOLITAN AREA													
1931 Male													
Female													
1941 Male	58,194	984	34,206	4,182	—	3,170	7,536	1,237	4,346	1,547	986		
Female	18,875	48	8,583	56	—	284	2,638	461	6,455	258	92		
1951 Male	83,727	1,513	46,630	7,069	1,166	4,799	11,042	1,627	6,481	2,709	680		
Female	30,266	185	12,923	177	144	830	5,208	1,148	8,750	676	225		
1961 Male	108,642	3,864	50,326	10,191	1,262	6,871	15,532	2,722	11,278	4,313	2,278		
Female	42,995	632	10,764	394	218	1,023	8,496	2,247	17,552	1,125	544		

Table A-7  
EVOLUTION OF THE MAJOR METROPOLITAN AREA ECONOMIC STRUCTURE, 1931-1961

CITY	Total Labour Force	Primary Industries	Manufac- turing	Construc- tion	LONDON		Trade	Finance et al.	Services	Govern- ment	N.E.S.
					Utilities	Transport- ation					
1931 Male	20,665	263	6,665	1,711	136	2,747	3,461	909	2,781	1,171	821
Female	7,672	5	1,795	20	10	308	1,171	539	3,644	133	47
1941 Male	19,882	207	7,513	1,625	224	2,213	3,803	818	3,315	—	164
Female	9,104	3	2,394	13	28	308	1,344	711	4,260	—	43
1951 Male											
Female											
1961 Male	45,380	455	12,935	3,912	704	4,002	8,092	2,064	7,143	4,917	1,156
Female	24,064	50	4,789	139	130	783	4,430	2,343	10,183	947	270
METROPOLITAN AREA											
1931 Male											
Female											
1941 Male											
Female											
1951 Male	29,317	147	10,342	2,969	669	2,885	5,058	1,095	5,972	—	180
Female	13,839	15	3,536	102	91	740	2,641	1,344	5,307	—	63
1961 Male	48,732	1,510	13,482	4,236	723	4,243	8,615	2,160	7,452	5,085	1,226
Female	25,108	166	4,934	147	135	814	4,619	2,420	10,602	990	281

Table A-8  
EVOLUTION OF THE MAJOR METROPOLITAN AREA ECONOMIC STRUCTURE, 1931-1961

CITY	Total Labour Force	Primary Industries	Manufac- turing	Construc- tion	WINDSOR					Finance et al.	Services	Govern- ment	N.E.S.
					Utilities	Transport- ation	Trade						
1931 Male	19,993	239	7,676	2,377	155	2,331	2,940	703	2,246	808	530		
Female	4,810	9	751	23	26	265	833	305	2,500	73	25		
1941 Male	32,419	346	19,703	1,735	274	2,024	3,813	659	2,483	1,133	249		
Female	7,854	7	2,041	37	51	170	1,395	291	3,662	152	52		
1951 Male	39,713	112	22,663	2,690	685	2,795	5,016	683	2,288	1,374	407		
Female	12,149	9	3,702	98	81	466	2,390	658	4,284	279	182		
1961 Male	29,247	325	12,199	2,472	378	2,312	4,321	684	4,179	1,485	892		
Female	13,140	37	2,353	100	91	400	2,300	912	6,316	421	210		
METROPOLITAN AREA													
1931 Male													
Female													
1941 Male	38,645	644	23,620	2,105	—	2,636	4,422	767	2,840	1,269	642		
Female	8,555	9	2,235	37	—	177	1,496	313	4,064	164	60		
1951 Male	51,318	283	29,707	3,655	856	3,563	6,312	841	3,899	1,655	547		
Female	14,582	15	4,472	115	89	550	2,871	803	5,188	328	235		
1961 Male	49,166	1,108	21,173	3,891	746	3,843	7,376	1,242	6,139	2,359	1,289		
Female	19,493	117	3,429	156	135	621	3,458	1,448	9,212	616	301		

*Table A-9*  
EVOLUTION OF THE MAJOR METROPOLITAN AREA ECONOMIC STRUCTURE, 1931-1961

CITY	Total Labour Force	Primary Industries	Manufac- turing	Construc- tion	WINNIPEG			Finance et al.	Services	Govern- ment	N.E.S.
					Utilities	Transport- ation	Trade				
1931 Male	71,644	2,401	14,548	7,038	660	10,935	14,240	3,201	10,079	3,776	4,766
Female	25,201	42	2,614	80	58	862	5,759	1,564	13,527	527	169
1941 Male	63,020	1,490	16,700	6,168	675	10,061	13,994	2,892	6,581	3,796	665
Female	26,609	31	4,107	58	78	830	6,349	1,544	12,603	896	113
1951 Male	73,254	891	20,596	6,358	1,685	11,921	15,376	2,668	7,815	5,449	495
Female	35,973	103	6,980	167	161	1,589	10,154	2,705	12,102	1,802	210
1961 Male	73,727	760	16,647	7,131	1,341	11,521	14,107	2,702	9,967	7,413	2,138
Female	62,350	102	6,772	215	260	2,256	9,639	3,339	16,890	2,040	837
METROPOLITAN AREA											
1931 Male											
Female											
1941 Male	92,370	3,879	24,414	8,937	—	13,886	20,323	3,963	9,084	5,549	2,275
Female	31,885	103	4,824	74	—	964	7,628	1,756	15,322	1,059	155
1951 Male	108,012	2,108	30,474	9,601	2,134	17,457	22,617	3,777	10,790	8,340	714
Female	46,719	227	8,796	219	190	2,057	13,383	3,602	15,650	2,312	283
1961 Male	129,121	1,861	28,912	12,237	2,234	20,807	25,820	4,981	16,174	12,892	3,203
Female	65,199	233	9,625	392	383	3,388	15,464	5,271	26,002	3,264	1,177





Table A-11  
EVOLUTION OF THE MAJOR METROPOLITAN AREA ECONOMIC STRUCTURE, 1931-1961

CITY	Total Labour Force	EDMONTON								N.E.S.	
		Primary Industries	Manufac- turing	Construc- tion	Utilities	Transport- ation	Trade	Finance et al.	Services		Govern- ment
1931 Male	24,552	2,081	3,362	2,359	154	3,948	4,474	854	3,783	1,980	1,507
Female	7,236	14	532	19	7	197	1,284	303	4,395	458	27
1941 Male	25,300	1,598	5,255	2,369	322	3,687	5,451	831	5,474	—	313
Female	9,942	28	1,016	18	24	202	1,979	367	6,261	—	47
1951 Male	48,955	2,510	8,214	7,887	824	6,272	9,940	1,518	5,474	5,878	428
Female	18,756	178	1,847	186	51	718	4,730	1,157	7,929	1,816	144
1961 Male	76,495	2,934	11,867	9,765	990	10,005	15,972	2,571	11,227	9,138	2,026
Female	36,286	338	3,138	370	135	1,603	7,952	2,284	16,434	3,150	891
METROPOLITAN AREA											
1931 Male											
Female											
1941 Male											
Female											
1951 Male	52,815	3,030	8,880	8,950	860	6,659	10,625	1,548	4,669	6,125	457
Female	19,426	191	1,917	192	51	735	4,925	1,191	8,214	1,859	151
1961 Male	90,815	3,939	13,973	12,008	1,106	11,599	18,762	2,929	12,567	11,682	2,248
Female	40,761	396	3,504	434	151	1,793	8,948	2,538	18,500	3,529	968

Table A-12  
EVOLUTION OF THE MAJOR METROPOLITAN AREA ECONOMIC STRUCTURE, 1931-1961

CITY		CALGARY										N.E.S.
		Total Labour Force	Primary Industries	Manufac- turing	Construc- tion	Utilities	Transport- ation	Trade	Finance et al.	Services	Govern- ment	
1931	Male	28,933	1,789	5,237	3,172	173	2,938	5,259	1,306	4,308	1,949	1,802
	Female	7,472	26	531	22	20	281	1,525	543	4,286	162	76
1941	Male	24,277	1,194	5,295	2,426	338	3,416	5,585	1,030	4,640	—	303
	Female	8,087	40	643	26	38	244	1,883	487	4,683	—	43
1951	Male	41,030	2,097	8,131	5,158	1,068	4,782	9,095	1,486	4,154	4,874	212
	Female	15,350	579	1,523	116	112	729	4,190	1,279	6,117	639	71
1961	Male	69,328	5,748	9,619	8,638	1,156	7,896	14,641	2,882	9,020	7,913	1,825
	Female	30,021	1,856	1,963	402	201	1,632	7,142	2,437	12,496	1,188	704
METROPOLITAN AREA												
1931	Male											
	Female											
1941	Male											
	Female											
1951	Male	43,927	2,436	8,709	5,703	1,134	5,047	9,507	1,515	4,329	5,322	225
	Female	15,881	596	1,601	121	113	744	4,315	1,301	6,365	648	77
1961	Male	76,751	6,099	10,895	10,172	1,255	8,995	16,109	2,979	9,707	8,499	1,941
	Female	32,605	1,929	2,169	441	213	1,739	7,737	2,587	13,747	1,287	756

*Table A-13*  
EVOLUTION OF THE MAJOR METROPOLITAN AREA ECONOMIC STRUCTURE, 1931-1961

CITY		Total Labour Force	Primary Industries	Manufacturing	Construction	VANCOUVER			Trade	Finance et al.	Services	Government	N.E.S.
						Utilities	Transportation						
1931	Male	91,230	7,502	15,872	10,910	277	12,550	15,043	3,578	14,700	4,234	6,564	
	Female	21,927	70	1,836	79	22	1,598	4,368	1,201	12,229	328	136	
1941	Male	84,810	7,043	23,945	8,053	537	10,453	16,502	3,312	10,577	3,529	859	
	Female	27,178	123	3,090	65	48	1,415	6,080	1,465	14,024	711	158	
1951	Male	103,724	4,053	27,324	9,647	1,552	13,855	21,182	4,037	13,973	6,542	1,558	
	Female	44,810	233	6,054	301	244	3,183	11,632	3,598	17,239	1,962	364	
1961	Male	103,301	3,451	22,149	9,228	1,302	14,318	19,972	4,590	18,275	6,637	3,379	
	Female	55,420	301	6,120	374	376	3,106	12,236	4,957	24,175	2,340	1,435	
METROPOLITAN AREA													
1931	Male												
	Female												
1941	Male	116,359	9,750	35,185	10,943	—	14,049	21,236	4,435	13,300	5,036	2,515	
	Female	32,091	136	3,766	81	—	1,662	7,014	1,741	16,633	857	181	
1951	Male	155,131	7,499	45,337	14,625	2,193	19,383	29,392	5,520	19,159	9,762	2,265	
	Female	59,227	412	8,436	388	323	4,207	15,038	4,554	22,817	2,471	581	
1961	Male	204,262	8,921	47,485	19,228	2,610	26,982	39,046	8,414	31,193	14,273	5,094	
	Female	90,497	814	10,000	669	569	4,763	20,853	7,504	39,187	3,730	2,408	

## Part III: Urban Prospects and Policy

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Chapter Three: The Framework of the Future:  
Structural Projections





## Chapter 3

### THE FRAMEWORK OF THE FUTURE: STRUCTURAL PROJECTIONS

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# Part III: Urban Prospects and Policy

## Chapter 3

### The Framework of the Future: Structural Projections\*

#### A. THE STRUCTURAL APPROACH TO FORECASTING

In this Part of the Report, we turn our attention to the future, so that we may begin to evaluate the implications of public policy action and inaction for the urban system.

In this chapter, we present our forecasts of the key determinants of the urban system assuming no major new policy changes. In Chapter 4, the responses of the urban system to this unconstrained expansion are assessed, with special references to the major problem areas. This permits us to erect a profile of the future urban system. In Chapter 5, we examine the policy implications of this forecast urban development pattern, and the alternatives available to us if various interventions are made into the urban system.

##### a) *The Nature of the Forecasts*

There are a variety of methods available to the forecaster, all of which entail a great degree of speculation and many subjective judgements. Two basic types are most commonly found: the simple extrapolation of past trends, and the structural approach. For short-term forecasting, during which structural changes tend to be modest, the simple extrapolations provide reasonably accurate and efficient estimates. The longer the horizon, the less successful they are likely to be, because they tend to ignore the importance of the imperceptible structural shifts which accumulate over time in such a manner that the very nature of the system is radically transformed.

What are the key structural components of our urban system and how can we anticipate their future dimensions? Perhaps the clearest answer to the latter question has been given by Trist:

“Just as the past can persist in the present so can the future lie concealed within it . . . in the most advanced countries, the post-industrial society is already structurally present. Far from being an imaginary entity which may possibly

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\*Additional data which support the methodology contained in this chapter are to be found in Research Monograph No. 5.

happen in the year 2000, structurally it has already occurred and is in our midst.”<sup>1</sup>

Our own “theory” of the development of the urban system is based on a structural approach, with particular emphasis attached to the economic-demographic determinants of that structure.<sup>2</sup> We shall, therefore, base our forecasts on the key structural components of these determinants. Our initial projections of economic structure will reflect the changes already under way in the national economy: the decline of primary industry and the very rapid shift into tertiary sectors. As a result, the dominance of services in the future will be clearly apparent.

Because of our approach to economic development, the evolution of the urban economic structure can be traced. This is based on our argument that the economy of mature urban units is tightly linked to that of the nation. From the forecasts of the urban economic structure, we can trace out the demographic implications. Our approach will determine the labour structure requirements for the mature urban units, and from this we can derive the future urban population requirements in these cities. We can then estimate the structural components of population change—natural increase and net migration—from the forecast needs (demand) and availability (supply). These economic-demographic forecasts will provide us with the urbanization dimension of the future, the central mechanism with which we can proceed to examine the micro-system implications in the following chapters.

### b) *Unconstrained Forecasting: The Future as Drift*

Despite the fact that we have based our approach to the urban future on our analytical framework, there is room for uneasiness about the whole approach. The doubts stem less from methodology, although that has its serious limitations, than from the conceptual commitment to the future as an unplanned process. The basic assumption underlying the forecasts is that the inexorable workings of the economy will continue to determine our urbanization process and hence the evolution of our entire urban system with its latent problems. The assumption is indeed based on past experience, but our analysis has shown that by forfeiting intervention in the basic process in the past, urban policy has been forced to be reactive rather than creative. If we seek to manage our urban environment more optimally, it follows that we cannot merely drift into the future but must design it so that we can make the urban system one that is capable of assisting us to achieve our collective desires. This goal requires direct intervention in the urbanization process, and means that the key economic and demographic processes, which we have let develop in an unconstrained manner in our forecasts, must be redirected. This will necessarily throw the forecasts off, but only as a result of clear policy commitment.

In other words, the forecasts are relevant for a pre-determined future. We do not present our forecasts normatively; indeed, we have already argued that this future is sub-optimal. But knowing what it may be provides us with a yardstick against which we can measure other and more preferable futures.

<sup>1</sup> Eric Trist, *op. cit.*, p. 3. Much of the following draws on the work of Trist and Gross.

<sup>2</sup> See Part II of this Report.

## B. FORECASTING THE DETERMINANTS OF THE URBAN SYSTEM

### a) *Alternative Approaches to Forecasting*

In this section, we shall develop forecasts of the major determinants of the urban system—specifically, the economic and demographic structure of the major metropolitan areas.<sup>3</sup> Our forecasts will include estimates for each of the decades up to the year 2001.

We have undertaken two basic approaches to forecasting these determinants. Both attempt to estimate urban population from projections of the various urban economic structures. The major difference between the two variants is that the first directly estimates the population in terms of demands created by the emerging economic structure of the major urban centres. It is merely assumed that net migration to these cities will adjust for any discrepancy between demand and that part of supply provided through natural increase. The second variant attempts to estimate migration flows directly, and adds these to natural increases to derive total population estimates. There are further differences between the two methodologies but these are rather minor.

Both variants start with the central analytical hypothesis: that urban growth is directly related to the growth and structure of the national economy.<sup>4</sup> With projections of national economic development, we are capable of projecting the growth of the urban system. This method is appealing since we have projections of the national economy that are reasonably reliable, largely because most of the tools of economic theory have been sharpened for the purpose of analyzing national economic change, such as growth and cyclical change. Furthermore, more data are available for the national economy than for the various urban economies.

<sup>3</sup> These cities had metropolitan populations of over 100,000 in 1961: Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Quebec City, Regina, Toronto, Vancouver, Windsor, and Winnipeg. They were chosen among the 17 CMAs because of their relative maturity and because of data availability.

<sup>4</sup> We have already "tested" this hypothesis in Part II, Chapter 2.



*Table 27*  
 RATES OF GROWTH, 1971-1981  
 IN GDP—ALL CANADA

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
SRG ESTIMATES				KAHN & WEINER ESTIMATES				BROWN ESTIMATES			HOOD & SCOTT Mean Migration Productivity Assumption
P-1 Past Trend		P-2 Productivity		Growth Estimates				P1	P2	P3	
Aggregate	Sum of Components	Aggregate	Sum of Components	Low 3%	Medium 5%	High 6%		Econometric	Low 2.5%	High 3.25%	
56.7%	72.0%	64.2%	51.4%	37.5%	61.9%	80.2%	52.9%	53.6%	68.2%	46.4%	55.9%

NOTE: (4), (11), (12) use 1970-1980. (5), (6), (7), (10) use GNE. (5), (6), (7) use 1975-1985.

SOURCE: Systems Research Group, *Canada 2000*, Economic Projections, Toronto, 1970, Figure 36, p. 75.

One simple method is merely to project gross domestic product for all of Canada, and then assume that each of the major cities will grow at the same rate. In *Table 27*, we have shown the estimates of GDP growth for the years 1971-1981 as estimated by various economists, each using alternate assumptions. The rate of growth per decade varies from a low of 37.5% to a high of 80.2%. The simple model would then apply these numbers to each of the cities to get a range of growth of the cities from which size estimates could be easily derived.

While such a method might be useful as a rough estimate, a more critical analysis makes it evident that not all cities grow at the same rate. One need only compare Windsor and Calgary<sup>5</sup> to see how different the rates of growth between cities have been in the past decade.

The divergence of the rates of growth in cities is due largely to their individual structural properties. The various industrial sectors of the economy have grown at different rates, and each city has a varied mix of sectors: a city that specializes in a fast-growing sector is likely to grow more rapidly than a city specializing in a slow-growing sector.

To be sure, even a city that specializes in a fast-growing sector may expand slowly; this can occur if the firms located in that city are backward with regard to that sector. If this is a very large firm, the entire city may grow slowly despite the industrial mix. Nevertheless, since we are dealing mainly with the large metropolitan areas of Canada, we can be confident that, in most cases, the sector will grow at close to the national rate. This, in fact, is the crucial assumption of our model: each sector in the major urban areas of Canada will grow at the same rate as that sector grows in all of Canada.

This assumption reflects the fact that these major urban areas are relatively mature. We have seen, in Part II, Chapter 2, that they dominate the economic activity of the nation. As a result, progress in the national economy is centrally tied to economic expansion in the major urban areas, and it is reasonable to assume a high correlation between the growth of their sectors and the overall national growth of these sectors. Furthermore, with reasonably sophisticated economic structures, these mature urban centres are affected less by any dramatic changes than are smaller, dependent urban centres.

With this assumption, we can then project the growth of each sector in the city to forecast the total economic structure of the city. Since we are dealing with a small number of cities, it is also possible to modify certain growth rates if we feel that a sector in some city is not likely to grow as quickly as the sectors will nationally. For example, we may feel that manufacturing industries will grow at a fairly slow rate in Windsor or in Quebec City.<sup>6</sup> In addition, the forecasts can be corrected over time if and when exogenous new forces become important in a particular city.

The critical variable in the analysis is the size of the labour force: it is primarily the labourer who links production and consumption. The initial projections of which we can be most certain are those of output, since it is in this

<sup>5</sup> See *Table 29*, page 133.

<sup>6</sup> This is discussed more fully in Section (b).

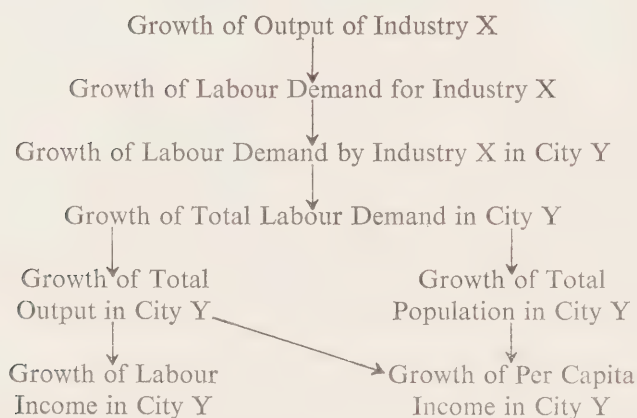
field that our data are most reliable. To arrive at estimates of output by sector, we take the trend growth rate of past output. We have chosen two years each in the same position in their respective cycles. The actual years chosen are 1957 and 1968, each near the peak of the cycle.<sup>7</sup>

In economic jargon, one might say that our model is labour-adjusting in that labour will move to those cities in which its services are required. This contrasts to a capital-adjusting model in which industry moves to where the labour supply exists. We feel that our model is a far more valid representation of the mature urban economy than a supply model. In the first place, as production industries become more capital intensive, economies derived from increased scale and from agglomeration tend to become far more important than the savings that come from paying a lower wage in a labour-surplus region (we assume, of course that this would be the only reason that a firm would go to a labour-surplus region, given that the government provides no added tax inducement for firms to go there). Second, with labour unionization of industry occurring at a national level for most unions, and with increasing resort to pattern-bargaining and nation-wide contracts, it is unlikely that the wage rate would be substantially lower even in a region of high labour surplus.

Thus, we assume output growth generates the demand for urban labour. Any shortfall in labour supply will lead to higher wages, and migration will take place to these areas of excess demand. The estimating procedure follows this assumption, and it is summarized in *Figure 8*.

*Figure 8*

#### GENERALIZED FORECASTING MODEL



<sup>7</sup> In 1957 the unemployment rate was 4.6%; in 1968, 4.9%

## b) *Population Forecasts: Direct Estimates of Totals*

This variant attempts to estimate the total population directly; since natural increase (i.e., birth and death) will yield only so many persons, the rest of the population must come from net urban in-migration.

Since our model is labour-oriented, it is from the labour-force size that we calculate both population and urban output. Population is arrived at by dividing each of the labour-force totals by the projected participation rate of the sex and then summing the two sexes.<sup>8</sup>

The forecasts of urban economic structure are based on data sources compiled from the breakdown of estimates of the output of industry, manufacturing, services and government, sub-groupings of the latter two, and the rate of increase in output per man.

Five different sets of estimates were compiled, each based on different assumptions, as follows:

N1—based on three assumptions: constant growth rate, labour output ratio, and labour force sex distribution. From these we arrived at a total estimated labour force.

N2—based on the assumption that manufacturing, services, and government are too complex to yield satisfactory results. We broke down these sectors, subject to certain aggregate constraints.

N3—based on the assumption that, essentially, the city grows at approximately the same rate as does manufacturing.

N4—based on the use of SRG estimates of *changes* in output per person in each of 13 sectors, we arrived at the total output of each city.

N5—based on the labour requirements of large cities for domestic and export activity. We arrived at minimum labour requirements of cities by sex for each sector.

In order to test the forecasting accuracy of the projections, actual 1951 data were used for the various urban centres to forecast for 1961. We were then able, in most cases, to compare the forecasts with actual 1961 data. (See *Table 28*.) We judged the N4 set of predictions to be the most satisfactory; they were not only the most accurate but also methodologically most satisfying since they incorporated structural changes and reasonable technical improvement assumptions. The projections were based on different assumptions, however, and would therefore not be valid for all the cities all of the time. Consequently, it is suggested that N5 would provide a better set of predictions for a less mature city, since N5 selects those sectors in which the city specializes, and whose growth determines the growth of the city. In addition, we found it advisable to limit the range of city size since, in the very long run, the structure of even the mature city may change.

<sup>8</sup> Male Labour Force = Male Population  $\times$  Male Participation Rate  
 Female Labour Force = Female Population  $\times$  Female Participation Rate

$\therefore$  Male + Female Population =  $\frac{\text{Male Labour Force}}{\text{Male Participation Rate}} + \frac{\text{Female Labour Force}}{\text{Female Participation Rate}}$

Table 28

TEST OF ALTERNATIVE PROJECTION TECHNIQUES  
FORECASTING EMPLOYMENT FOR 1961

(Numbers in Thousands)

METROPOLITAN AREAS		Actual Employment 1961	N1 Projection		N4 Projection		N5 Projection	
			No.	Error	No.	Error	No.	Error
Calgary	M	77	70	-11%	57	-26%	63	-18%
	F	33	25	-24%	23	-30%	21	-36%
	T	110	95	-14%	80	-27%	84	-24%
Edmonton	M	91	82	-10%	67	-26%	69	-24%
	F	41	30	-27%	29	-29%	27	-34%
	T	132	112	-15%	96	-27%	96	-27%
Hamilton	M	109	141	29%	108	0%	118	8%
	F	43	50	16%	42	-2%	36	-16%
	T	152	191	26%	150	-1%	154	1%
London	M	45	48	7%	39	-13%	45	0%
	F	24	22	-8%	20	-17%	17	-29%
	T	69	70	1%	59	-14%	62	-10%
Montreal	M	566	689	22%	549	-3%	611	8%
	F	241	274	14%	238	-1%	206	-15%
	T	807	963	19%	787	-2%	817	1%
Ottawa	M	113	127	12%	113	0%	142	26%
	F	55	56	2%	55	0%	54	-2%
	T	168	183	9%	168	0%	196	17%
Quebec	M	86	113	31%	94	9%	108	26%
	F	40	52	30%	49	22%	54	35%
	T	126	165	31%	143	13%	162	29%
Regina	M	31	34	10%	29	-6%	34	10%
	F	16	17	6%	16	0%	15	-6%
	T	47	51	9%	45	-4%	49	4%
Toronto	M	529	618	17%	498	-6%	589	11%
	F	261	254	-3%	221	-15%	184	-29%
	T	790	872	10%	719	-9%	773	-2%
Vancouver	M	204	250	23%	203	0%	227	11%
	F	90	93	3%	85	-6%	76	-16%
	T	294	343	17%	288	-2%	303	3%
Windsor	M	49	87	76%	67	37%	73	49%
	F	19	24	26%	21	11%	18	-5%
	T	68	111	63%	88	29%	91	34%
Winnipeg	M	129	175	36%	139	8%	152	18%
	F	65	93	42%	66	2%	58	-11%
	T	194	248	28%	205	6%	210	8%
All Urban	M	2,029	2,434	20%	1,963	-3%	2,231	10%
	F	928	970	5%	865	-7%	766	-17%
	T	2,957	3,404	15%	2,828	-4%	2,997	1%

SOURCE: Research Monograph No. 5, Table 7.

In Table 29 we present a comparison of results for the year 2001 to indicate the difference between our "best" forecast and that of SRG. The differences are substantial. Our figures (N4) reflect the view that migration (internal and international) will respond to the economic development of urban areas. The shift to rapidly growing labour-intensive service industries will impose great manpower needs. Some of this will be provided by increased use of women in the labour force. But the demands will accelerate relative to the past, augmenting the migration ratio. By way of contrast, the SRG forecasts assume a continuation



Table 29

A COMPARISON OF FORECASTS FOR THE YEAR 2001  
Population (thousands)

METROPOLITAN AREA	1966 Actual	N4		SRG	
		2001 Forecast	Increase 1966-2001	2001 Forecast	Increase 1966-2001
Calgary.....	331	937	601	807	476
Edmonton.....	401	1,223	822	1,001	600
Hamilton.....	449	1,201	752	894	445
London.....	205	674	469	425	225
Montreal.....	2,437	6,374	3,937	5,091	2,654
Ottawa.....	495	1,616	1,121	1,031	536
Quebec.....	413	1,178	765	868	455
Regina.....	131	438	307	298	167
Toronto.....	2,158	6,510	4,352	5,185	3,027
Vancouver.....	892	2,482	1,590	1,770	878
Windsor.....	212	577	365	344	132
Winnipeg.....	509	1,614	1,105	719	210
TOTAL.....	8,633	24,824	16,191	18,433	9,800

SOURCE: Systems Research Group, Population Projections *op. cit.*, Figure SA-15, p. 77. Research Monograph No. 5, Table 11.

of migration rates in the period 1961-1966, which may be biased downward not only because of the unique period selected, but also because of the failure to deal with the changing urban economic structure.<sup>9</sup>

The implications of our own method are clear: the concentration of urban growth in the largest urban centres will greatly exceed the high levels expected by SRG, intensifying the urban problem to a significant extent. If these demands are met, there will be profound implications for the non-metropolitan areas of the nation, as well as for our international relations. If they are not, the rate of economic growth will be slowed, higher incomes will accrue to those in metropolitan areas as a result of excess demands, and the problems of regional disparities will be exacerbated. These matters are more fully explored in our Research Monograph No. 1 on poverty.

Thus far, our forecasts have been based on an approach to the urban unit that places primary emphasis on the inter-connectedness of the urban system. In other words, we have related the expansion of each unit to the mechanisms that play a key role in determining the evolution of the total urban system. Despite the merits of this approach, it must be qualified because not all components of the system face the same opportunities. Changing degrees of connection will provide varying quantities of leverage to the components of the system. Thus, Winnipeg's growth has been constrained because of weakening ties to the urban system as a result of changes in transport technology. The same applies to Halifax. Other factors, such as geography, can make expansion so

<sup>9</sup> SRG estimates a national population increase of 13.8 million between 1966 and 2001. See Systems Research Group, *Canada 2000*, Population Projections, Toronto, 1970. Thus the 12 city increase will take 71% of the total growth. Between 1850 and 1900, the share of growth was about 30%, and between 1900 and 1950 this share was 73%. (See Table 5, p. 71). This levelling off appears to be unrealistic. Our own N4 forecast puts this share of growth at 117%, implying depopulation of certain other areas.

costly as to impede the rate of urban development. Montreal, for example, appears to feel such constraints because of the high cost of access to the island.

As a result, our estimates must be tempered by some appreciation of the major constraints upon, and unique structural features of, the particular urban areas. Since we are dealing with only 12 cities, it should not prove very difficult to provide a brief look at each of them. Two warnings are in order, however. In the first place, these analyses will necessarily be very cursory. Much more city-specific knowledge is needed to appreciate fully these variations, but the availability of time and data restricts our efforts for the moment. Second, our own perspective is coloured excessively by the present, and it is quite likely that there will be a greater vitality in the future in many of the cities than a subjective glance would reveal. Consequently, it is possible, though not of course necessary, that our more rigorous projections will provide more reliable indications of city size than these subjective indications.

#### CALGARY AND EDMONTON

Looking first at the two Alberta cities of Calgary and Edmonton, it would seem that much of their recent vitality has been due to the oil boom in the province; in 1961, 6.7% of the male labour force in Calgary were engaged directly in oil-well operation, while only 14% were engaged in manufacturing. This compares with 0.3% and 32.3% respectively in Toronto. Consequently, our estimates of the growth of these cities should be viewed relative to both the expected demand for oil and gas from Alberta, and the expected ability of these cities to diversify and establish a more solid economic base. Our own projections yield fairly low estimates of growth by both N4 and N5; this is due largely to an anticipated high growth rate in labour productivity in the mining industry, a growth resulting from the mechanization of many operations. In addition, the two cities have fairly high shares of their economies in trade and construction—both of which also have slow net growth rates. The implication is that growth in these cities is likely to taper off. The slow growth rate projected is in sharp contrast to SRG forecasts: they claim Calgary and Edmonton will have the fastest growth rates<sup>10</sup> of all 12 cities. These forecasts result from their use of a methodology of crude extrapolation, since both cities have grown very quickly over the past decade. If these cities are to continue to grow rapidly, then they will require a continued boom in petroleum or a restructuring of their economy with the addition of new, diversified growth-oriented sectors, most likely in manufacturing. Such growth usually comes about either because the city has a comparative advantage in the production of some good, or because the city is a Central Place, servicing a large hinterland. Regarding the former, with the exception of meat slaughtering, there appears to be no speciality in these cities. Concerning the latter, a provincial population of 1.4 million (in 1966) does provide a medium-sized market, although it is unlikely to support two major urban centres. Furthermore, the large distance from other markets—in both

<sup>10</sup> Relative to *their* estimate. The Prairie Provinces Cost Study Commission (1968) also implies a higher growth rate for these centres. But the use of 1941 as a base year, and province-wide data render their findings suspect.

Canada and the United States—makes specialization in a “foot-loose”<sup>11</sup> industry unlikely.

#### HAMILTON AND TORONTO

These two cities form the core of what has come to be known as the Ontario megalopolis. Since the entire region between them is already urbanized, it becomes difficult to define the geographic borderlines of the two cities. It is quite likely that growth attributed by our methodology to one of the cities might really occur in the other city or in the urbanized centres that surround them, Mississauga being the major area of potential.

For Hamilton, our N4 predictions are fairly low: in fact for 1971-1981, they are the second lowest among all 12 cities. When we compare this with the N1 forecasts, we find the latter to be more than twice as great. The greater figures are the result of high concentration of the city's labour force in manufacturing, especially in steel: 21% of the male labour force are directly involved in the metal industries. Since this sector will likely undergo a significant degree of mechanization and automation<sup>12</sup>, little growth is forecast by our N4 method. Moreover, since the steel industry is expanding rapidly in other centres—such as Becancour and the proposed mills on the north shore of Lake Erie—the growth of Hamilton may not be very great if it continues to rely heavily on steel. There seems to be evidence, however, that the city itself is beginning to diversify and develop a more complex and sophisticated economic structure. Furthermore, because it is located in the centre of the large market area of Western Ontario and Toronto, its potential for growth seems quite high. More specifically, as far as Hamilton is concerned, our estimate may be too low *because* our basic assumption may be incorrect—i.e., that its economic structure will change. However, we feel our test was sufficiently adequate regarding Hamilton that we shall abide by our forecast.

This is in contrast to our expectations regarding Toronto. Here, the economic structure is already diverse and sophisticated. Consequently, we believe that our theory of national forces determining urban growth is most valid here: our N4 projections should be fairly reliable, and SRG estimates (which are approximately one-half of our estimates) are much too low. Should Toronto grow at a slower rate, it will largely be due to our inability to incorporate the spill-over effects within the megalopolis region, referred to at the beginning of this section.

#### QUEBEC CITY AND MONTREAL

Almost all of the comments made regarding Hamilton and Toronto are also applicable to the other megalopolis region of Canada, the one that is growing along the Montreal-Quebec City axis. In this case, however, our results must be tempered as a result of developments that have significantly impeded in-migration into the province from other provinces, especially the Maritimes.<sup>13</sup>

<sup>11</sup> This is a term used by Perloff to refer to industries for which locational factors are not of great importance.

<sup>12</sup> Thus reducing the required labour input.

<sup>13</sup> See L. O. Stone, *op. cit.*



In the past, most of the urban growth has been based on intra-provincial migrants, from rural to urban centres. With a declining birth rate in Quebec, however, this source of migrants may not be so productive. The other aspect of economic development that may be affected is capital investment. There is some evidence that new capital formation in the province is declining relative to the rest of Canada, but these data are far too scanty to be reliable or significant at present.

While our forecasts for Montreal are almost identical to those for Toronto, using all three methods, we find our projections for growth in Quebec City to be significantly greater than those for Hamilton. This occurs because Quebec City has already developed a highly diversified economy. Since Quebec is at the edge of the megalopolis, however, it is possible that its growth rate—even as calculated by N5—may be too high as the central parts of the megalopolis absorb much of the growth of the region.

#### VANCOUVER

Vancouver is likely to be one of the fastest growing cities in Canada. Since it has a diversified economy, our theory has already given it a fairly high growth rate. But in addition, the development of the west coast, together with a strengthening of our commercial link with Asia, promises to lend further impetus to the growth of this city.

#### WINNIPEG

The future of the city of Winnipeg is somewhat difficult to predict. Since it has a fairly diverse economy, our theory postulates significant growth in the size of the city. But recent events, such as the development of containerized shipping, have downgraded the city's importance as a trans-shipment centre; and the closing of its airplane maintenance facilities and its defence establishment have significantly reduced the city's employment rate. These considerations might lead us to revise even our N5 estimates downward. Since the city already has a highly developed infra-structure, however, it is possible that it will develop as an important centre for mid-western Canada, in much the same fashion as the cities in the mid-Western United States have developed. If this is true, then we can likely expect a somewhat slow growth in the short run as the economy of the city readjusts, followed by rapid growth as the entire region begins to "take-off".

#### REGINA

Regina is the other major urban centre in mid-Western Canada.<sup>14</sup> In the past, it has served as an administrative and regional centre for the area. Consequently, a large share of its labour force has been engaged in trade, services, and public

<sup>14</sup> By mid-Western Canada, we mean the region between Thunder Bay and the eastern boundary of Alberta.

administration. Since we project a large increase in each of these sectors for all of Canada, fairly high growth rates are forecast for Regina. A more useful projection might have come from an estimate of the growth of production in the province of Saskatchewan—specifically its oil, potash, and wheat. Since the latter two have had very large surplus production in the recent past, it is likely that in the very short run, Regina will not grow as fast as anticipated. However, in the long run, its growth—like that of Winnipeg—will be linked to the probable growth in the Canadian mid-West.

#### OTTAWA

Ottawa's growth is inexorably linked to the growth of the Federal Government. Over 30% of its labour force in 1961 was directly employed by the Federal Government. Since we project a 4% growth rate in the government sector, it is not surprising that our method should yield—for N4 and N5—the highest rate of growth of all Canadian cities. Public administration is labour intensive; thus, it is likely that the city's growth will be almost proportional to the growth of GNP. Nevertheless, since the size of the civil service is, to a large extent, a variable of Federal Government policy, our forecasts of the size of Ottawa should be adjusted to conform with policy decisions. The major one in this context will be the degree to which Federal Government operations become decentralized. The reasons for this will not be economic but political, and in the absence of a clear policy commitment, this is impossible to forecast. The best indication to date of Federal intentions for the National Capital area is the recent NCC estimate which suggests a population of about 900,000 by the end of the century.

#### LONDON AND WINDSOR

These two cities lie in the region between Toronto and Detroit. In the recent past, this region has undergone rapid growth and urbanization. London, lying at the centre of this region, is an example of Berry's "typical" Central Place. With an economy that is fairly diverse, it has grown quite rapidly, and our study projects still further rapid growth.

In contrast, Windsor is at the edge of the region, and its economy is not diverse: in fact, almost one-quarter of its male labour force is engaged in the manufacture of automobiles. When we add to this the fact that half of its female labour force is found in the service industry, it is not surprising that we have arrived at fairly high estimates of Windsor's growth. Since the automobile industry in *Windsor* has not been growing quickly in the recent past, the city itself has been growing very slowly. Like Hamilton, Windsor must diversify if it is to grow rapidly in the future: but, unlike Hamilton, Windsor's main potential market—Detroit—is difficult to enter because of international tariffs. In fact, much of Windsor's future growth may be linked to persons who work in Detroit but reside in Windsor. Apart from this, we feel that the SRG estimate is probably preferred relative to our own various projections.



### c) *Population Forecasts: Component Estimates*

The previous section attempted to forecast the key metropolitan variables, using a simulation approach. We generated demands for labour based on our forecast economic structure, and assumed that these demands would necessarily be met by appropriate migration flows. In other words, we attempted to measure the stock demand without concerning ourselves with the process whereby these demands might be met.

We have already observed in Part II, Chapter 2 the vital role migration has played in urban development. Consequently, we feel that a check on the simulation approach should be provided. In this section, we proceed to estimate the net migration flows into metropolitan areas directly, based on the statistical relationship of the demand for labour to these flows. We then calculate natural population growth in these areas, so that we can arrive at total population forecasts in terms of the component flows. These will provide us with a crude consistency check on our earlier estimates. Several variations in methodology, and the problem of lack of time to reconcile these variations, have led to some of the observed divergencies. However, the central *national-level* forecasts of SRG for output per worker by sector were used here as well, and tend to keep the forecasts within the same national context.

In sum, we take the view that the national-level figures provide an outlook upon future output and output per worker (by sector) *if* certain recent annual rates of growth are to be held constant up to the year 2000. The implied metropolitan area projections (the subject of this section) are then to be viewed as indications of levels of migration to metropolitan areas, given that the sectoral outputs and productivity grow at the fixed rates indicated in the national-level figures. The national-level figures are to be prorated among CMAs in the manner selected, and the transformation made from employment growth to migration.

To maximize the potential pay-off from such forecasting activity, it becomes important to de-emphasize reliance upon a single forecast at the CMA level (particularly when it is recognized that future levels of economic and social variables tend rather to be results of *interaction* between past conditions and unforeseen future developments than mere extrapolations of past trends), and to use alternative futures. The more insensitive the indicated government policy to variations within that range, the more confident we can be about the need and wisdom of such policy. Accordingly, the forecasts in this section are based on alternative data series. A moderate effort is made to identify the "preferred" series; however, the "preferred" series represent informed guesses. Since no one enjoys the use of an effective crystal ball to reveal the future, additional projection "runs" can be made subsequently using modifications of the input data series supplied in adequate detail,

The general strategy for preparing the projections was as follows. First, the given national-level forecast of output was multiplied by the given national-level forecast of the reciprocal of output per worker to obtain a forecast of employment demand by sector. For the purposes of this exercise it was deemed

sufficient to aggregate the forecast employment which was initially calculated for 12 industry groups into two broad industry groups: (1) primary and secondary, and (2) tertiary.<sup>15</sup> The primary and secondary grouping includes agriculture, forestry, fishing and trapping, mining, manufacturing, construction, utilities, and transportation. The tertiary grouping includes trade, finance, insurance and real estate, services, and public administration. Having obtained the national-level forecast of employment demand by sector, our intention was to apply proportional shares to the sectoral totals for a given year in order to allocate parts of each total to each of the Census Metropolitan Areas (CMAs).

The proportion that each CMA's employment bears to the national total was approximated from decennial census data going back to 1941 and then projected forward in terms of four alternative projections (called "High," "Medium", "Low", "Preferred"). In subsequent use of the projections, primary emphasis was placed on the Preferred series, which essentially is the series judged most likely to represent the actual future. (It turned out, however, that these alternative employment projections generated minor variations in the population projections.) The CMA shares were applied to the forecast national-level employment demand by sector to obtain employment demand totals for CMAs in future census years up to the year 2001.<sup>16</sup> From these totals five-year growth rates of employment by sector were calculated for each CMA for use in connection with the projection of migration.

The procedure in projecting migration was generally as follows. Multiple regression equations linking 1961-1966 values of net migration and in-migration were linked to lagged 1956-1961 values on these variables as well as 1951-1961 growth rates of employment in the two broad sectors selected, the 1961 level of the ratio of employment to population, and some other less obviously economic variables. The parameters of these multiple regression equations were estimated for the cross-section of 19 CMAs. Having obtained the net migration and in-migration figures, we obtained out-migration in the future by subtracting the former from the latter. Suitable historical out-migration figures and explanatory models were not available in time to permit the derivation of net migration from independent forecasts of in-migration and out-migration (the historical in-migration and net migration data were obtained from fundamentally different sources).

To obtain the projection of total population growth, we added the most readily available projections of the national-level natural increase. First, a multiple regression equation was used to link the 1961-1966 value of the ratio of CMA's natural increase rate to the corresponding rate for Canada as a whole to the 1956-1961 value of this ratio, and the current (1961-1966) and the lagged 1956-1961 net migration ratio. This procedure would permit the forecasting model to be sensitive to interactions between net migration and natural increase. The

15 This aggregation might explain part of the discrepancy between these and the forecasts in the previous section, which were highly disaggregated.

16 This marks the second divergence in the two methods. The stock forecasts estimated base-year shares and then assumed relevant growth rates. The estimates in this section attempt to forecast shares directly.

parameters of this model were then used in the forecasting period to project the ratio of the natural increase rate in a given five-year period for a particular CMA to the corresponding rate for Canada as a whole. This projected ratio was then applied to the Canada-level value of the natural increase rate in the relevant five-year period to obtain the projected natural increase rate for the CMA in question.

With the projected natural increase and net migration rates in hand, we then had the projected growth rate, for the relevant five-year period, for each CMA. This growth rate was applied to the CMA population at the beginning of the five-year period to obtain the projected CMA population at the end of the relevant five-year period. The results of the preferred alternative for the year 2000 are contained in *Table 30*, below.

Some implications of our projections of CMA employment shares should be noted. In projecting the CMA shares for the primary and secondary sector, it was assumed that the main inter-CMA differentials that have appeared in recent decades will persist through the 1970's and 1980's for the most part. In particular, the sharpest increases in shares would be observed for Montreal, Toronto, Vancouver, Calgary, Edmonton, Kitchener, and London. We have provided for a slightly higher-than-average (among these particular CMAs) amount of levelling off in the *increase* of shares for the two largest CMAs after 1986, by which time several other centres should be enjoying more fully than they presently do, the scale effects of really large population size. This increasing enjoyment of scale effects should be particularly true for Vancouver, Calgary, and Edmonton; perhaps most of all for Vancouver, being the major Pacific gateway to what should be a rapidly growing urban economy and market in Western Canada. (It may be noted that for Montreal, Toronto, and Vancouver we have provided a somewhat wider range of alternatives than in the case of the other centres so as to allow for the powerful impact of percentage errors in the assumptions concerning these areas.) In the case of Montreal the levelling off in the *increase* for shares is a bit sharper than for Toronto, in recognition of the uncertainties created by recent political developments (which are currently reflected in emerging office space surpluses and apartment vacancies, and falling residential land values).

At the opposite end of the CMA spectrum in regard to the shares of the national employment in the primary and secondary sector, we are projecting basically a continuation of the relatively flat or declining recent trends shown in shares of the national total for Halifax, Saint John, St. John's, Windsor, Winnipeg, and Victoria. On the whole, we do not envisage developments that will markedly improve the growth prospects of these areas *over and above the prospects of the other CMAs*, in regard to the primary and secondary sectors. (The main possible exception, in terms of recent developments, is Halifax as a centre of increasing importance in regard to assembly and trans-shipment of durable goods imports from countries east of the Atlantic.) In the case of Sudbury there has been a recently rising trend in regard to the CMA share of the national employment in primary and secondary activity; but our Preferred series flattens out this trend. We would expect that continuing technological changes in



Sudbury's major secondary industries will lead to continuing decline in labour input per unit of output, and we do not see that Sudbury has sufficient locational advantages to increase its *share* of the national employment in primary and secondary activity by means of diversification.

For the remaining CMAs we have provided mainly for a linear extension of recently rising trends, as we do not foresee any developments that would change the growth prospects of these areas sufficiently to provide for marked alteration in the slope of the trend.

Turning to tertiary employment, we have roughly the same group of faster growing CMAs as for primary and secondary employment; and we assume that the economic forces that have resulted in the identification of this group will persist through the 1980's and 1990's. At least, we see few significant indications at the moment of developments that will alter this pattern. The growth of Toronto's share of the national tertiary employment has been particularly notable since the 1950's, and we have for the most part extended this upward trend through the latter half of the 1980's. In the case of Montreal we are projecting a rising trend, at a rate that is slightly slower than that of Toronto. Although a slightly rising trend is projected for Montreal, the level of its share of the national tertiary employment remains below that which was attained in 1941 *according to our historical estimates*; whereas in the case of Toronto the share of the national tertiary employment by the year 2001 is distinctly above the level attained in 1941. We would expect both CMAs to be the nerve centres of a highly "tertiary-oriented" national economy by the year 2000. Following comments made in the preceding section about the expanding urban economy in Western Canada, we have projected relatively sharp increases in the share of the national tertiary employment for Vancouver and Edmonton. We also envisage a slightly increasing relative importance of Victoria as a public administration and service centre within the context of an expanding Western economy.

A special comment on Ottawa is in order, since this CMA has shown a marked increase in its share of the national tertiary employment in the first half of the 1960's. The High alternative for Ottawa extends this increase and at an increasing rate, while the Medium and Low for Ottawa provide markedly slower rates of advance. The Low series is Preferred for Ottawa, if the expectation is realized that recent dampening of the expansiveness in regard to Federal Government employment in Ottawa will continue for several years, and will later on be accompanied by conscious efforts to decentralize the federal establishment.<sup>17</sup>

A special comment may also be made about Halifax, where we have not extended the recent trends automatically but have allowed for a more gradual rate of growth (in share of the national tertiary employment) than has been indicated up to 1961, largely because the recent population growth does *suggest* a slackening in the growth of the employment base in Halifax. On the other hand, we have extended a fairly steady (if unspectacular) growth in shares shown

<sup>17</sup> We have already referred to this. See Section (b).

for Saskatoon and Regina to reflect the expected growing urban market in Western Canada for which these major centres will be important nodes.

Growth shown in the *shares* for Winnipeg in both selected sectors is relatively sluggish through the projection period, and this is consistent with the historical data and the recent population figures provided by the 1966 census and 1968 population estimates. We envisage that the real thrust of urban market growth in Western Canada will be in the far West around an increasingly diversified economy. As a traditionally wholesaling and distribution centre for agricultural products, Winnipeg might be negatively affected by a restructuring of prairie economic activity that will decrease the importance (to the country as a whole) of the city's functions in regard to such products, although its current size does provide for potentially rapid growth if the economy can be restructured.

In the cases of Hamilton and Sudbury, we note that these centres concentrate fairly heavily on large-scale heavy industry or mining. We envisage that technological changes in these industries will continue to decrease the employment multiplier effects of growth in such activities, so that continued growth of these industries in Hamilton and Sudbury is not expected to set off sharp increases in the attraction to working forces from outside. We expect such attraction to focus more in the centres that are concentrating on light manufacturing, such as Kitchener, and we additionally expect these centres to continue to develop a thriving associated tertiary activity.

Generally, we have allowed for a decreasing *rate of increase* in national shares of employment in either of the two sectors for the metropolitan areas *as a whole* when we enter the 1990's. In short, in the next 20 twenty years we expect a continuing rapid trend towards concentration of activities in the largest 19 centres; but in the 1990's we expect the trend to slacken, and centres that are not now included in the list will be increasingly advantageous locations for new activity, particularly as the diseconomies of very large size begin to plague the very largest centres in Canada (unless, of course, major technological changes or policy innovations emerge to nullify these diseconomies).

What about the impact of the new regional development planning on the centres that are now markedly more slow-growing than such regions as Kitchener, Calgary, and Edmonton? Significant alternation of the accumulated distribution of locational advantages and market potential in the present system of CMAs may well require government intervention on a scale that is probably not foreseen at the moment. Some efforts may be made to buoy up the growth in the lagging regions, but it is not expected that the *overall pattern* of differentials in the old system of regions can be altered by minor government tampering.

Of course, these speculations about the prospects for CMAs from the Atlantic to the Pacific are subject to disagreement from other sources. It is possible to re-run the projection programs with new employment figures (alterations of Research Monograph No. 5, Table 25) should they be felt to be more justifiable as a result of better evidence or new policies about to be adopted.

It is important to note that the differences between the population projections implied by the High, Medium, and Low employment demand projections for



the CMAs are not great. By the year 2001 it would appear that the differences are practically insignificant for the larger CMAs. This is shown clearly in Research Monograph No. 5, Table 24, which gives the total population projection (Series III). The closeness of these figures does not mean that they are necessarily correct. It does mean, however, that substantial changes in the figures will require a wholesale lifting of the entire series of employment projections for the CMAs (that is, much stronger increases in their proportional shares of the national total employment than those which are provided by the range of alternatives used—Research Monograph No. 5, Table 25), or a slower rate of growth in the ratio of employment to population than is provided for in our combination of the national level employment and population forecasts. It may well be that the national population projections are too low (although they are quite close to SRG's Preferred population forecast for Canada), or that the national employment forecast is too high.

## C. SUMMARY AND CONCLUSIONS

### a) *An Evaluation of the Alternative Forecasts*

We have attempted to estimate the basic parameters determining our urban system for the next 30 years. Our estimating procedure was based on the theoretical model specified in Part II, Chapters 1 and 2, whereby the economic development of the nation was seen to play a crucial role in shaping the growth and structure of urban Canada. Using the same basic forecasts of national economic structure (SRG), we have tried to allocate the growth in that structure to the major units in the urban system. From this determination of the future labour requirements in these units, we could estimate population growth.

Two basic approaches to these estimates were tried. The first was a complex simulation of urban labour requirements to a very fine level of industrial detail. The historical record suggested these demands would be quite close to the actual labour force. To check this assumption, we attempted to estimate directly the labour supply response to these demands, and particularly the migration component of that supply. Several variations in calculating labour demand make this approach not directly comparable. These include some selectivity among the final migration series, and a high level of aggregation of industrial sectors which understates the growth of tertiary activity.

In *Table 30* we present the two most satisfactory series: N4 and Series 1, alternative A from Section B. The results are quite close for the three largest cities although Toronto and Vancouver appear to be somewhat understated. The 1A series is consistently below the N4 and the total of that series for the 12 cities lies mid-way between our best stock demand estimate and the SRG best supply estimate. Because of the problem of aggregation, we feel the 1A series is probably too low, although, as we have indicated, the N4 estimates are probably too high for several cities, particularly Ottawa and Winnipeg.

It would be reassuring to be able to settle on one hard number for each city as our best forecast, but our uncertainty about the future precludes that. We offer instead a variety of estimates reflecting the best assumptions that we think

Table 30

# ALTERNATIVE STRUCTURAL FORECASTS OF URBAN POPULATION

CITY	TOTAL POPULATION (in '000)	
	N4	1A
Calgary.....	937	705
Edmonton.....	1,223	881
Hamilton.....	1,201	1,031
London.....	674	452
Montreal.....	6,374	6,346
Ottawa.....	1,616	1,138
Quebec City.....	1,178	891
Regina.....	438	275
Toronto.....	6,510	6,128
Vancouver.....	2,482	2,026
Windsor.....	577	432
Winnipeg.....	1,614	932
ALL CITIES.....	24,824	20,537

SOURCE: Research Monograph No. 5, Table 28(d): N4 estimates. Research Monograph No. 5, Table 19: Alternative A.

can be made at this time. Among these, we have suggested that we prefer, for methodological reasons, the N4 and 1A estimates. The individual reader will have to come to his own conclusions based on his own particular view of the future.

It should be added, in conclusion, that the differences between these forecasts should not be exaggerated. They all show the same basic thing—that national growth will be increasingly concentrated in the major urban centres, and that their respective growth rates will be extremely high in relative and in absolute terms. In the following chapter, we examine in greater detail the implications of this anticipated urban trend.

## b) *A Profile of the Future*

These estimates permit us to derive an economic-demographic profile of the major urban areas in Canada for the year 2001. For policy purposes, the intermediate dates will prove just as important, for critical intervention periods can be decided upon. The results are summarized in *Table 31*, with the full data given by year in Research Monograph No. 5, Tables 28 (a) through 28 (d).

The importance of the urban areas in Canada has already been suggested by SRG. They forecast that Canada will be 94.1% urban by the year 2001.<sup>18</sup> Using their national population forecasts,<sup>19</sup> which pose no problems of consistency with ours, we calculate that 73% of the population will live in our 12 major centres by that date.<sup>20</sup> Their own, more conservative estimate of popula-

18 Systems Research Group, *op. cit.*, Figure 12, p. 46.

19 *Ibid.*, Figure 8, p. 22. The population forecast for Canada is 33.8 million.

20 See Table 31, page 146.

Table 31  
PROFILE OF YEAR 2001

CITY	Output (in '000,000 of \$)	Total Population (in '000) (N4)	Period in which Population will Reach 500,000	Output per Worker	Output per Total Population
Calgary.....	5,530	937	1981-1991	12,745	5,902
Edmonton.....	6,280	1,223	1971-1981	11,222	5,137
Hamilton.....	8,097	1,201	1971-1981	14,101	6,739
London.....	3,498	674	1991-2001	11,348	5,192
Montreal.....	41,412	6,374	—	13,194	6,497
Ottawa.....	6,741	1,616	1961-1971	8,866	4,171
Quebec City.....	5,717	1,178	1971-1981	10,157	4,855
Regina.....	2,082	438	after 2001	10,594	4,753
Toronto.....	39,471	6,510	—	12,712	6,063
Vancouver.....	13,810	2,482	—	11,355	5,565
Windsor.....	6,320	577	1991-2001	13,121	6,279
Winnipeg.....	9,225	1,614	1961-1971	11,951	5,716
ALL CITIES.....	148,183	24,824			5,969

SOURCE: Research Monograph No. 5, Table 28(d): N4 estimates.

tion in these urban centres<sup>21</sup> puts the proportion somewhat lower at 55%. Despite this difference, the salient point is that by that date, these centres will have become the focal points of national economic life. The polarization will continue, with Montreal and Toronto arriving at sizes comparable with the great United States centres of New York, Chicago, and Los Angeles. Vancouver will be larger than either of the two large Canadian cities today. Five other centres will have grown to well over one million in population size: Edmonton, Hamilton, Quebec City, Ottawa, and Winnipeg. The remaining centres will lie in the current size range of Ottawa to Vancouver.

The differences in timing will provide opportunities for staging policies. If we select 500,000 as a crude measure of maturity, we will have five mature units by 1971, all of which will be running into major urban problems. The following decade will see three more enter that range: the years 1981-1991 will see Calgary enter that range, and the final decade will see London and Windsor enter the same phase. Regina and several other centres that we have not fully dealt with — Saskatoon, Kitchener-Waterloo—will likely not reach our level of maturity until after the turn of the century. The most important aspect of these findings is the immediacy of the need for an urban policy. The greatest problem areas are already almost unmanageable. By the year 2001, we can look forward to the type of intractable situations presently facing major urban centres in the United States and elsewhere. The longer the situation is permitted to develop, the greater will be the locking-in of the micro-system because of the growing interdependencies, and the less amenable it will be to even drastic policy moves.

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21 *Ibid.*, Figure SA 15. Population forecast for these centres was 18.4 million.





## Part III: Urban Prospects and Policy

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### Chapter Four: Urbanism in the Unconstrained Future



# Chapter 4

## URBANISM IN THE UNCONSTRAINED FUTURE

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# Part III: Urban Prospects and Policy

## Chapter 4

### Urbanism in the Unconstrained Future\*

#### A. INTRODUCTION

It would have been optimal to undertake a full forecast of the urban system in this chapter, based on our forecasts of the major determinants in the preceding one. We expected that this would not be possible, however, because our understanding of the parameters of this system is highly imperfect. A fully developed model is required, and we are far from being able to provide one. Part of the problem lies in the state of the art; we are still only beginning to understand the complex mechanisms of the urban system. More important is the fact, documented throughout this study, that the data we have permit no statistical estimation of the relevant coefficients. For the first time we have accumulated some reasonably sophisticated data on poverty. Our understanding of the housing market in the aggregate is somewhat better, but as yet we have no housing model for individual cities, or for key groups of consumers. Our evidence on transportation is quite complete on the technical side, but we have been unable to estimate with any degree of accuracy for forecasting purposes the impact on the urban system. On such important issues as the environment, social problems, and the public economy, the situation is even worse.

As a result, we are forced to proceed in a less ambitious manner in this chapter. We shall explore the two issues where we have perhaps the greatest confidence in our forecasts: housing and transport. Since these likely will be the key elements in the urban future, even the partial evidence we present will be important. Some inferences will be drawn at the conclusion, but they will be highly speculative.

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\*Additional data which support the estimates presented in this chapter are to be found in Research Monograph No. 5.

## B. HOUSING IN THE URBAN FUTURE

### a) *The Forecasts*

The area where we have perhaps the best forecasting models, and where federal policy has its greatest urban impact, is housing. We have attempted to use the CMHC forecasting model, with adaptations, to indicate the structure and level of housing “demand”<sup>1</sup> in major urban areas by quinquennia up to the year 2001. Because of the need to launch these forecasts quickly, we used SRG population forecasts. As a result of subsequent research, we have found those forecasts to be substantially too low. Thus, the forecasts of housing demand in this section also are understated. A crude measure of the degree of understatement can be obtained by taking the ratio of our two “best” population forecasts to those of SRG for each of the relevant metropolitan areas.

Our estimates are summarized in *Table 32*, with the background data provided in Research Monograph No. 5. We include our estimate of the degree of understatement of the aggregate demand over the period.

### b) *The Spatial Implications*

If we restrict our perspective to the three largest metropolitan areas—Montreal, Toronto, and Vancouver—the estimates suggest a housing “demand” over the next 30 years amounting to over two and one-half million units. If we assume a mean correction between the extremes of the suggested adjustment, the total requirement will amount to four million housing units in those three cities alone.

Furthermore, of the required units, a higher proportion than in the past decade will be for family households. The peak in non-family households as a proportion of all households appears to have been reached in the past few years, and the post-war baby boom is now leading to a major increase in family households which will be particularly evident in the next decade.

<sup>1</sup> See the Introduction to this Report and also Research Monograph No. 2 for some reservations about this approach to measuring demand and about its practical use for long-term forecasting.

Table 32

## FORECAST HOUSING DEMAND, METROPOLITAN AREAS, 1971-2001

METROPOLITAN AREA	Type of Demand	Forecast Additions to Housing Stock (thousands)				Total 1971-2001	Per cent Adjustment Suggested
		1961-71	1971-81	1981-91	1991-2001		
Halifax:	Family						
	Non-Family	n/a	n/a	n/a	n/a	n/a	
	Total						
Quebec:	Family	27.0	36.3	41.2	42.4	119.9	
	Non-Family	11.9	16.7	18.8	22.3	57.8	
	Total	38.9	53.0	60.0	64.7	177.7	9-88%
Montreal:	Family	170.1	238.6	266.3	264.0	768.9	
	Non-Family	95.3	123.1	120.7	144.9	388.7	
	Total	265.4	361.7	387.0	408.9	1,157.6	56-64%
Ottawa:	Family	32.8	43.1	46.2	49.8	139.1	
	Non-Family	16.5	22.3	22.0	25.2	79.5	
	Total	49.3	65.4	68.2	75.0	218.6	26-116%
Toronto:	Family	170.5	234.2	280.7	296.1	811.0	
	Non-Family	60.9	84.6	94.0	110.2	288.8	
	Total	231.4	318.8	374.7	406.3	1,099.8	38-47%
Windsor:	Family	7.4	14.4	15.4	16.4	46.2	
	Non-Family	3.8	4.6	3.5	3.5	11.6	
	Total	11.2	19.0	18.9	19.9	57.8	n/a
Winnipeg:	Family	18.0	19.1	22.8	21.8	63.7	
	Non-Family	14.7	15.6	13.7	11.4	40.7	
	Total	32.7	34.7	36.5	33.2	104.4	118-434%
Regina:	Family	7.8	12.6	14.7	16.1	43.3	
	Non-Family	6.3	8.1	8.4	9.3	25.8	
	Total	14.1	20.7	23.1	25.4	69.1	-10-85%
Edmonton:	Family						
	Non-Family	n/a	n/a	n/a	n/a	n/a	
	Total						
Calgary:	Family						
	Non-Family	n/a	n/a	n/a	n/a	n/a	
	Total						
Vancouver:	Family	50.9	69.7	80.4	81.1	231.2	
	Non-Family	42.3	54.4	52.6	56.4	162.4	
	Total	93.2	124.1	133.0	137.5	393.6	35-100%
TOTAL MTV*	Family	391.5	542.5	627.4	641.2	1,811.1	
	Non-Family	198.5	262.1	267.3	311.5	839.9	
	Total	589.0	804.6	894.7	952.7	2,651.0	

\*Montreal, Toronto, Vancouver.

Source: Research Monograph No. 5.

The reason for concern about this increase is that the family household-demand pattern is typically for single-family dwellings. These are very land intensive. In the past decade, the relatively greater importance of non-family units led to somewhat less pressure on land because those demands could be met through economical high-rise construction. In the future, barring new forms of family housing—and we see none on the horizon that are feasible in economic terms—the space demands in these metropolitan centres will be extremely great.

A crude minimum estimate based on past high densities of 6,000 persons per square mile suggests an additional 400 square miles and a maximum of 650 square miles *added* to Toronto's land area alone. Similar amounts would hold for Montreal, and Vancouver would require between 125 and 250 square miles.

It is impossible to estimate directly the impact of these space requirements on land prices, although they will make our past trends seem flat by comparison. The secondary effects will be even more significant, since the competing demands for urban space lie at the heart of the full range of urban problems. We envisage an enormously expanded demand for private transit to overcome the increasingly difficult problem of access in such enlarged cities. We foresee a great drain on municipal fiscal resources to service these housing and transport requirements, both in terms of new capital outlays for schools, sewers, and roads, and in current outlays to maintain the greatly expanded system.<sup>2</sup> The cost of land in the central city will also rise, further squeezing the urban poor. The expense of providing for them will reflect these rapidly rising land costs. As an example, in New York City today, the cost of a public housing unit is \$30,000, or twice as much as in Canada. Most of this difference is attributable to higher land costs, and it is suggestive of the scale of the problem with which we shall be faced. Social unrest, pollution, and the other side-effects of rapid urbanization, while unquantifiable, will increase in intensity and therefore in terms of real costs to these communities.

In the appendix to this section we present some evidence on the current actions being undertaken by municipalities to meet these anticipated space demands. It is clear that the responses are very short term and quite unstructured, so that the unconstrained urban future appears to be certain to escalate to a severe extent the current complex of urban problems.

### c) *Short-term Land Requirements*

Our forecasts led us to conclude that the future demands for housing and urban land as a result of unconstrained growth would be particularly severe in the next decade. Consequently, we undertook a survey of the land situation in the major metropolitan areas to see how the land market would respond to these demands. The expertise of CMHC's Branch Offices proved of immense value to us. Their reports were summarized, and we concentrated upon the major issue of residential land needs and the most important factors influencing its supply.<sup>3</sup>

<sup>2</sup> See also Section C, below.

<sup>3</sup> See Research Monograph No. 5, Appendix for Part C.



For example, the time taken to process subdivision applications is often raised by developers as a major problem. From the evidence submitted, six to nine months seems to be the time period frequently involved, with large and complex proposals taking even longer. This must have some effect on final costs, particularly during a period of high carrying charges. One must acknowledge, however, that developments are now put together on a much larger scale than they were 10 or even five years ago. Such developments require a period of planning and preparation by a municipality in order to allow its services to cope with the demands which will be placed upon it, and this planning cannot be undertaken until the developer's proposal is received. In addition, it is becoming common practice, because of municipal demands for prepaid services, for developers to hold land in its "raw" state until the last possible moment. Since raw land costs appear to be a fairly small part of the final market price of the house, it would appear that speeding-up of such subdivision processing as might be possible would not have a significant effect on *this* price. In an economy where price is largely based upon demand, and where there is scarcity, it is doubtful whether such minor savings would be passed along to the consumer.

Two major aspects of the demand-supply problem emerge in the reports from almost all the metropolitan areas. The first problem is created by land speculation, which, if in the hands of few developers or land holding companies, can provide sufficient market power to create even greater scarcity of building land. Furthermore, as developments become larger in scale, individual companies tend to concentrate their holdings in particular parts of a city, thus encouraging monopolistic situations. A number of provincial housing agencies and municipalities are trying to ameliorate this situation by establishing publicly owned land banks. As long as they follow a policy of selling lots at or near market price, they will not in fact reduce prices, but if this is done on a sufficiently large scale, they may well stabilize them. There is insufficient evidence to say what the effective scale of public involvement can be; but it may be noted that in Regina, where land costs are reasonably under control, the city is marketing 25% of the building land.

In Montreal and Quebec, where there is no public land assembly, building lot costs are well below those of other metropolitan areas, even allowing for the fact that services are not pre-paid. Part of the explanation for this may be the large number of municipalities involved, together with the ability to secure approval of the subdivision well in advance of the possibility of servicing. The greater fragmentation of land holdings may permit individuals or small building firms to acquire lots easily. When municipal services are finally brought to these scattered developments, however, the unit costs tend to be greater so that higher taxes along with frontage charges cancel out at least some of the savings in initial land costs.

The second major problem which appears to influence the supply of land is the method of financing the capital works program which needs to be undertaken by the municipality. Trunk sewer, water, and power services must be extended and often a new plant is needed, in advance of the new development. Many municipalities appear to be trying to recover the costs, at least partially.



by acreage charges or some other type of impost at the time of subdivision approval; but even so, the financing of these works is a major problem. At a time when municipal budgets are under severe strain, the procedure inevitably adopted by the councils is to defer these capital works longer than would otherwise be desirable. Such action aggravates the shortage of available building land and puts a further premium on the limited amount which is marketed. The returns are almost unanimous in listing the financing of municipal works as one of the most serious problems affecting future urban growth and, more specifically, the supply and cost of land for housing.

One interesting fact that emerges, and is worthy of further study, is the variation in costs of servicing lots. For example, there does not appear to be sufficient difference in the standards to account for the \$100 per foot cost in Toronto and the \$50-\$60 per foot cost mentioned by several other cities. It appears that in none of the metropolitan areas will topographic or soil conditions or any other physical problems be a major hindrance to urban growth, nor will these factors significantly influence the supply of building land. Even in Halifax, which is surrounded by considerable rough terrain, there appear to be adequate alternatives to meet the anticipated demand.

#### d) *Some Demographic Implications*

The previous forecasts are based on a complex projection of the urban demographic structure and the probable housing requirements of various components of that structure. In Research Monograph No. 5, Tables 46 to 53 present the background forecasts on age groups and their housing requirements. It should be recalled that these data are based on the SRG estimates, which we judge to be too low. The difference will be made up by migration, which typically adds to the younger end of the age spectrum.

The data reveal most dramatically the very rapidly growing housing needs of persons over 65 years of age. We forecast a virtual end to lodging and greater longevity, so that the dwellings to be occupied by the aged will increase by a factor of three on the average, as compared to an increase of just over two for all other groups.

Moreover, the bulk of the increase (57%) will entail non-family units<sup>4</sup> typically aged individuals, who already constitute the bulk of the urban poor. This lack of resources, their specific housing needs, and the anticipated costs of core land would seem to pose a very grave threat to these persons in terms of their ability to acquire adequate shelter. To the extent that poverty is dependent on the urban process, our forecasts raise great fears about the very substantial impact of that process, operating in an unconstrained fashion, on the aged.

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<sup>4</sup> For Toronto, see Research Monograph No. 5, Table 49.

## C. TRANSPORTATION IN THE URBAN FUTURE

### a) *Introduction*

Canada is no exception among the nations of the world in being troubled with urban transport problems. Generally, the urban transport problem exhibits the following characteristics: the transportation system is a conglomeration of competing modes of transit over a dense network of routes; it is closely bound to the urban system and its attendant complexities; strictly commercial criteria may lead to socially wrong choices of modes; and new transport systems tend to be difficult to insert into existing arrangements and are immensely costly.

Here we will present some relevant facts on present modes of transportation and we will attempt to derive forecasts of future development. We will also suggest alternative forms of transport, focussing our attention on the most important, critical, and promising elements. Since the plans and problems of individual cities have been considered in detail in Research Monograph No. 3, in this section the urban transport problem will be examined on a national scale.

### b) *The Future Demand for Urban, Inter-city, and Rural Transport up to the Year 2000*

The prime factor affecting the future demand for transportation is population. The Economic Council of Canada forecasts that by the year 2000, the population of Canada will be about 34 million (see Table 54, Research Monograph No. 5). Most of the increase will occur in the major metropolitan areas. Thus, we can expect that here urban transport problems will be the most severe. The degree of severity will relate to the density of the population compared to road mileage per capita, the quantity and length of intra-city trips, and the physical difficulties and costs involved in fully expanding the capacity of highways.

To obtain some perspective on the transport problem, we will examine the current most common modes of transport, the distribution of traffic over the highway system, and modal characteristics and trends. Then we should be able to forecast traffic and transit trends in the future.

The most popular mode of transport is, of course, the car. Car ownership in Canada in 1967 was calculated at 0.29 cars per capita. This figure is expected to climb to 0.33 by 1970. By ownership, the nine major cities in Canada account for almost half the cars in the country (see Research Monograph No. 5, Table 55).

There are three possible methods of forecasting car ownership: a) as a function of income, b) in terms of historical growth, and c) in terms of approaching a saturation level. The last method is particularly relevant to Canada in view of the country's unusual age distribution and the substantial changes in the population that can be expected in the 1970's. Using this method, we concluded that because of the changing age structure of the population towards the working and car-owning age group, and in view of forecasts that the potential real income per capita will increase by 30% between 1967 and 1975, it is very likely that by 1980 Canada will attain a car ownership of 0.45 cars per capita.

Estimates of car ownership and use can be employed to obtain estimates of total car mileage and hence vehicle mileage. With the help of comparative data from Britain and the United States, we arrived at estimates of future car mileage for Quebec and the Atlantic Provinces and for the rest of Canada (see Research Monograph No. 5, Table 56).

Car mileage, which at present accounts for about 70% of total road vehicle mileage, can be expected to slightly more than double from 1970 to 2000. This rate of increase will take place as follows: 60% in the decade 1970-1980, and 20% per decade thereafter. Clearly, this increase will produce heavy additional demands for rural and urban highways, especially over the next 10 years.

Let us now consider future trends in the numbers and utilization of other vehicles, in particular trucks and buses, which provide the second most important mode of transport.

In 1967, 1,460,000 commercial vehicles (other than buses) were registered in Canada. On the basis of registration increases over the past decade, and comparable figures in the United States, we can expect commercial vehicle mileage by 2000 to be about 4,000 million miles in urban and 13,000 million miles in rural areas. This increase is, of course, dependent on growth and location of industries, trends in tonnages per vehicle mile, and the substitution of road transport for other modes, particularly for the movement of manufactured goods.

Buses (including trolleys and streetcars, but excluding school buses) are expected approximately to double their vehicle mileage by the end of the century. This increase probably will be augmented by the decline of rail passenger services.

We find that traffic volumes are unevenly distributed over the Canadian road system, a point that has great importance in establishing present and future traffic volumes in urban areas (see Research Monograph No. 5, Table 58). It seems reasonable to forecast that 50% of the vehicle mileage will be urban by the year 2000.

We must take into consideration the magnitude, characteristics, and trends



for different modes of transport. The private car, accounting for about 90% of total passenger miles, is by far the largest and cheapest carrier. Buses are the next most important. The cost per passenger mile of urban buses is substantially above that for rural buses. Rural buses have a higher occupancy, and their operating costs are lower. Although they are experiencing deficits and difficulties at present, buses should be increasingly in demand in the future. Despite subsidies, it seems that rail passenger services, apart from commuter services, will decline owing to heavy deficits on direct costs.

Next to buses in importance is air service. Air service is a high cost, high speed, high convenience mode, and competitive over long distance. It is predicted that the rate of growth of air travel, which has been doubling every five years, will soon slow down and reach a saturation level.

Examining the present and future demand for freight transport (Research Monograph No. 5, Table 59), we find that road transport accounts for about 10% of the total transport figure, while urban road transport accounted for only about 2% of total ton mileage.

In preparing our forecast of traffic and transit, we found that national traffic volumes have doubled in the decade 1958-1968, at an annual rate of increase of 7.2%. This rate of increase is expected to be only 5% per annum up to 1980, and 2% per annum thereafter up to the year 2000. Although car ownership is expected to reach saturation level by 1980, there will still be a substantial number of people without cars, generating a demand for public transport. On the whole, with the expected disappearance of passenger rail service, inter-city bus transit should increase substantially. Urban transit depends on future costs and price trends, however, and on the prospect for technological and other improvements. We predict a falling rate of increase in future demand for road facilities and traffic (Research Monograph No. 5, Table 60).

From these demand forecasts we arrive at the following conclusions. The nine major centres will experience severe problems in terms of population and transport, while the pressures will be less in some 46 smaller centres. The population of smaller centres of less than 50,000 inhabitants will remain almost static. Car ownership in the nine major centres is expected to rise to a saturation level of 0.45 cars per head by 1980. The increase in population and car ownership will reflect a corresponding increase in both urban and rural road traffic. Rail passenger transport will decline while inter-city bus transport will increase, but still the problems will remain with urban transport.

### c) *The Supply of Transport Facilities*

We have thus far considered the demand for the various modes of transport at current price and cost levels, and with existing technology. We will now discuss anticipated changes in costs, prices, technology, and supply in the future.

As with other economic activities, transport has undergone changes in price and cost levels as a result of increases in the price of factors of production employed. But it has seen improvements in productivity resulting from technology, from higher load factors, and from improvement in organization.

As the real wages of labour in transport are certain to increase in the future, we must consider, for each mode, to what extent this increase can be offset by the above mentioned changes. For private cars, which entail no labour costs of operation, a slight rate of depreciation, and a future of increased economies of scale, there should not be any increase in real costs. For the other forms of transport, however, labour costs account for a substantial portion of total costs. In both the rail and trucking industry, from 60% to 70% of the total cost is apportioned to labour. Air transport and, to a limited extent, inter-city buses should be able to keep passenger costs per mile steady and still maintain their expected levels of service.

It is in urban bus transport that we expect the greatest rise of labour costs per unit of service. The prospect is very real, for the future, that urban buses will face a rise in cost per bus-mile and per passenger-mile given existing technology and current standards of service.

A large variety of new urban transport systems are presented to us daily for consideration. We feel that new technology in transport should be studied scientifically. The user's needs and behaviour must be examined, and then an attempt should be made to design better technical substitutes for the various existing modes.

One suggested innovation is smaller cars. It is logical to consider that the street area per car could be halved if the average Canadian car was changed to the smallest mass produced car. For the sake of efficiency and safety, however, and to allow for variation in width of vehicles, cars need a "dynamic" space around them. (The dynamic space needed by various sizes of cars is shown in Research Monograph No. 5, Table 61). We have to conclude that little can be gained from insisting on small cars for urban use.

The electric car seems to offer distinct advantages over the conventional car with an internal combustion engine; but its disadvantages should be considered briefly as well. Weighing such points as longer expected life, easier transmissions, cleanliness, and silence against the high cost of batteries, limited range and speed, difficult and time-consuming refuelling, and burdensome weight added to the car, not to mention comparable operating costs for both, we find little evidence to support a "breakthrough" for the electric car.

It may be possible to develop mass transit systems in those cities whose population growth will take them to the critical threshold in the near future. It is much more difficult to introduce them into existing systems in larger cities. Mass transit has potential as a competitive mode since it is possible to attract substantial numbers of users to only a few corridors for long urban journeys. High costs of specialized track for such transit could be lowered by the use of existing track or rights of way; and considering the long journey, fewer stops, increased speeds, and the use of the car as a feeder mode, the mass transit system could be competitive in time.

Comparative studies of bus and rail transit in Atlanta and Edmonton (Research Monograph No. 5, Tables 62 and 63), bear out this point. It appears that the successful operation of mass transit requires a city with a large population and high density. But we feel that in view of certain social issues, costs, and



alternatives, smaller centres also can benefit from this system.

Studies of the developments in mass transit technology made by the international firm of de Lieuw Cather reveal only four promising systems and of these the duo-rail was found to be the most successful. A study of urban transport efficiency in Canada was carried out by N. D. Lea and Associates. It favoured particularly two central circulation systems: a moving-belt system and a programmed module system. As a system which attempts to combine the advantages of private transport and transit, the study found the demand-activated bus the most promising.

The moving-belt system raises certain questions about entry and exit from the guideway system. The computerized dial-a-bus system which accepts telephone demands and tries to solve routing problems by computers, seems to be worthy of examination. But doubts arise when one considers costs and techniques.

We have not so far discussed the wider social issues in the transport market and the supply of transport facilities. There exist categories of people who are so poor and/or immobile that in spite of fare concessions, they can make little or no effective demand for transport. The problem of supplying adequate transport facilities to deprived people raises complexities that cannot be solved without involving other factors such as urban layout.

Finally, we should consider the future supply of highways (urban, inter-city, and rural) to meet the increased traffic demands projected in this study. The exercise, however, is of limited validity, since all facets of urban transport problems and policies have not been examined.

We estimate the demand for upgrading of rural highways by the end of the century to total \$9 billion at 1970 prices. Similarly, an expenditure of \$9 billion will be required to keep pace with traffic increase on the main inter-city arteries. It is expected that urban freeways will cost in total \$14 to \$15 billion by the end of the century. The orders of magnitude and time shape of highway investment demand are examined in Research Monograph No. 5, Table 65. The expenditures by all levels of government on maintenance, and investment of rural and urban highways are examined in Research Monograph No. 5, Table 66. The tables reveal that there should not be any great problem in meeting the future total demand for road investment, with a small increase in road expenditure (Research Monograph No. 5, Table 67); however, a sizable deficit in meeting urban highway needs will arise if urban road expenditures continue in the present proportion. To rectify this, a substantial increase in total road expenditure must be met, or a diversion made from rural expenditure to urban.

It is obvious from this section that there are no simple answers to the urban transport problem. But one must not be overly pessimistic. Canada has resources and expenditures enough to solve the problems. Her authorities and consultants are among the best in the world. Finally, it must be remembered that general transport problems are closely related to urban matters such as town planning, and environmental and social issues, which in fact seem more neglected than do the problems of urban transport.

## D. CONCLUSIONS

Our inability to develop a fully articulated urban model has restricted the scope of our projections. But we have been able to present estimates of the two major processes that shape the urban system as a result of its expansion: housing and transport. Our housing findings suggest an *increase* in housing demands over the next 30 years that greatly exceed our present available stock. The impact of these demands on space in metropolitan areas will be particularly great because of the changing demographic structure of the population, in favour of those units that require relatively more land. The consequences of these demands cannot be quantified, but our analysis suggests that, because scarce land is central to the urban problem matrix, the whole range of urban problems and particularly that of the aged poor will be escalated onto a sharply rising growth curve.

Because of our automobile-structured cities, the expectation is that no major transportation innovation will be feasible. Low densities, extreme sprawl, and the relatively low cost of the private automobile, together with the existence of an in-place road infra-structure, all make drastic changes to the transit system highly unlikely. The costs of implanting new technology by removing part of the present system, particularly with the anticipated land costs rendering it increasingly valuable, will further foreclose these alternatives. The problem is that the transport system is intimately connected with the pattern of urban development. The past development of our cities, based on automobiles, renders a fundamental restructuring towards new modes virtually impossible as far as the major metropolitan areas are concerned.

In addition, we have found that many of the difficult housing demands will be focussed primarily on the next decade. This coincides with the greatest pressures about to be felt as a result of transit developments. The result is that the solutions to our urban problems cannot be put off—effective policies are called for now if we are to alleviate the extremely costly consequences of rapid urbanization. It is to this policy issue that the next chapter is addressed.

## Part III: Urban Prospects and Policy

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### Chapter Five: Directions for Public Policy



# Chapter 5

## DIRECTIONS FOR PUBLIC POLICY

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# Part III: Urban Prospects and Policy

## Chapter 5

### Directions for Public Policy

#### A. PUBLIC POLICY AND URBAN CANADA

##### a) *Introduction*

This part of the study is an examination of urban policy in Canada. As such, it is more a study of what might be than what is, since even according to a restricted definition, no governmental bodies, federal or provincial, can be credited with the development and execution of an urban policy in Canada at the present time. What substitutes for it is a complex set of uncoordinated, often contradictory, essentially random public policies and programs provided in the wake of strong economic forces which essentially set the agenda for urban growth.<sup>1</sup>

This conclusion is founded on the operational definition of urban policy employed in this chapter. Section A presents a discussion of the dimensions of urban policy.

In Section B the discussion turns to a consideration of three questions which comprise the framework of the paper. First, in the absence of national urban policies, what role does public policy play in shaping the urban centres of Canada: by whom is it performed and in what manner? Second, what factors obstruct the formation of comprehensive urban policies? Third, what are the prospects of developing urban policies? Here, the role of provincial governments is emphasized. Next, the status of urban policy across Canada is sketched, in terms of current municipal approaches. The section ends with an examination of the federal role in policy making.

In Section C of this chapter, we examine urban policy in the unconstrained future: that is, policy required to deal with problems of the urban environment should urbanization proceed unplanned as in the past. An institutional structure is recommended for the effective operation of a national urban policy, and three policy options are presented and evaluated.

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<sup>1</sup> See Part II of this Report.

Section D discusses the urban future as choice. Here two additional policy options are suggested, but with the difference that these are based on the assumption that we can and should control the development of the urban system.

It should be noted here that because of constraints imposed by the study, our discussion of the framework of urban policy is a brief and somewhat superficial analysis of concepts and a highly selective survey of conditions across the country yielded by the study of a limited number of documents and discussions. Documentation in this area is so hard to come by that without first-hand research, the confidence of one's assumptions is severely reduced. Yet overall, the pattern appears to be consistent enough that the broad analysis probably is close to the mark.

### b) *Elements of Urban Policy*

The phrase "urban policy" is subject to many interpretations. If asked, a municipal official, a provincial legislator, or a federal bureaucrat each might say that his government indeed has an urban policy. And each would be partially correct. At one level, the powers and responsibilities delegated to city governments by the provinces represent, at any one time, a partial statement of urban policy. Provincial governments administer a variety of services that specifically, but more often generally, have an impact on urban areas. This too constitutes a partial statement and when combined with that of the delegated powers administered by cities, represents a more comprehensive explanation of urban policy. Similarly, programs of the Federal Government are part of the overall picture.

The point is that, in aggregate, all these—municipal, provincial, federal—constitute the sum of policies affecting urban areas, directly or indirectly. Do they then, together, constitute an "urban policy" when observed from the perspective of the city, the province, or the Federal Government? The answer, of course, is that they do not. They generally lack consistency, coordination, comprehensiveness, and explicit goals. They are a *mélange* of programs and policies that *affect* urban communities but which are not *specifically tailored for* urban communities. If such a plethora of "other directedness" is not urban policy, what might the dimensions of such a policy be?

With no pretense of being exhaustive, among the most important components of such a policy are the following:

#### (i) PURPOSE

An urban policy states a set of explicit goals for urban areas. As elaborated below, if urbanization has been governed by any conscious public objectives at all, these have been on the one hand, to encourage growth, apparently for its own sake; and on the other, to provide public works and public welfare programs to support piecemeal, spontaneous development impelled primarily by private initiative. In contrast, urban policy suggests a shift in the locus of initiative, imposing on public authorities an obligation to orient, rationalize, and plan the physical and economic but also the textual character of urban life.

Thus, through a set of complementary policies and programs, an urban policy represents an explicit statement of the purpose of urbanization, its pace, its character, and the values that are to prevail as a result of it. Obviously, the bounds of human rationality are such that urban policies can never be more than partial statements. But the rigorous kind of examination implied by the formulation of urban goals necessitates careful consideration of the often uncritically accepted premises of the dominant pattern and values of human settlement today.

## (ii) SCOPE

An urban policy is distinguished by its comprehensiveness. Often such policy is thought of more in spatial terms than in a broader construction. But it is a holistic concept. Urban planning will not function properly unless it is framed within a global economic planning policy.

In recent years, it has been recognized that economic planning and socio-physical or, more broadly, environmental planning are merely different facets and different *stages* of the total planning process. The essence of economic planning whether at a national, provincial, or regional level is that in addition to its concern for capital allocation, it also has a fundamental spatial component involving alternative locational arrangements of capital expenditure and functional priorities for current expenditure. It is the failure to recognize that economic and environmental planning are simply the expression of the same thing, in different ways, and the concomitant failure to provide a global economic development strategy, that have impeded the formulation of comprehensive urban policies.

In addition to its economic dimension, urban policy has other components. Urban improvement does not necessarily involve urban growth, for there are qualitative as well as quantitative goals. That is to say, cities can easily continue to grow without further improvement if the quality of life within them does not grow as well. Through the application of public policy, or a process of *urbanification*, the quality of the environment, economic opportunity, social justice, and public morality become components of urban policy. Similarly, the responsiveness and accessibility of government, its economy, and its efficiency fall within the general framework.

## (iii) INTEGRATION

Implicit in its comprehensiveness is the integrated character of urban policy. All factors in the urbanization process are interdependent.<sup>2</sup> Yet the incidence of much public action in urban centres is disjointed, random, and unrelated to specific urban goals. In part, this is attributable to the institutional structure of government as reflected in the dozen or more departments of the Government of Ontario which are directly involved in some aspect of education and training,

<sup>2</sup> See Part II, Chapter 1 of this Report for an analysis of this interdependence.



or the 100 public agencies in the "rationalized" governmental structure of Metro Toronto. But the need for integrated policy is a function of the expanding role of government. Whereas public policy was once restricted to relatively narrow, discrete ends, its contemporary comprehensiveness produces sets of complementary services which require coordination if their full effectiveness is to be realized. In no other context is this more apt than the city. In slightly different terms, the Economic Council of Canada has said that "... the increasing and interdependent demands upon the city all point to the urgent nature of long-range comprehensive planning of urban space. The essential need is for a synthesis, a comprehensive philosophy, a co-ordinated concept of urban development."

#### (iv) DISCRIMINATION

It is obvious that policy directed at the city must discriminate among other objects of public concern. Yet it is the absence of just this abstraction of urban from other policy that has been so apparent in the past. For a great number of possible reasons, the federal and provincial legislators of this country have been beset by tension between demands for policies of equalization and demands for policies of selective development. The cross-pressures of political life have pushed public policy towards the middle ground, militating against specialized treatment of unique cases. Thus, despite the unique material needs of urban centres, they often have been treated as general categories. This approach is bound to be exacerbated and become more anomalous as urban Canada grows.

There are many dimensions to this question: rural and urban areas are treated as identical categories; policies which might recognize the special cases of say Vancouver, Toronto, and Montreal are applied consistently throughout the country as are those which might discriminate between say Montreal, Quebec City, and Cantons de l'Est as opposed to Hull, Trois Rivières, and Chicoutimi; the varying needs of specific groups within cities are met by universalistic rather than particular programs. Legislation covering education and health services, for instance, pays scant attention to the particular needs of cities.

Urban policy, then, requires recognition of the unique character of cities and it must be designed to have selective impact.

#### (v) INSTITUTIONAL MACHINERY

Though institutional machinery is not commonly thought of as a component of urban policy, it undoubtedly should be. In addition to providing answers and specifying instrumental means, urban policy should provide methods by which the right questions can be asked. In other words, a choice of organizational structure is a choice of which interests or which values will have preferred access or be given greater emphasis, particularly in the meta-policy stage of determining assumptions and setting priorities of policy making. Organization is strategy so that if, for example, urban poverty policy specified participation by the poor in decision making (as it surely should today), institutional pro-



vision for this aspect of the program would be essential for its effective operation.

Considered in another way, differences in the appropriate scale of urban policy making and policy application require institutional structures which are congruent with the scale of the problem to be solved. Clearly, the institutional structure of many urban centres cannot meet this criterion.

### *c) The Current Policy Framework and Its Limitations*

These, then, are some of the more apparent dimensions of urban policy. It is a broad concept distinguished by a comprehensive bundle of integrated policies that together constitute a full statement of goals for urban development. Measured against this model, the present pattern of urban-affecting policies is singular at best. To illustrate some of the inconsistencies, we shall examine present methods of determining the direction, velocity, and character of urban development.

As already suggested, no explicit policy guides urban growth in this country. Impetus for urban growth probably derives from our societal preoccupation with economic achievement. The Ontario Economic Council recently noted that we have very specific economic goals such as growth, full employment, and rising levels of income which are recognized and accepted by government, labour unions, agriculture, and business. Economic goals, not the goal of individual freedom or other humanistic values, are used to justify the institutional adjustments that have taken place in our society, particularly government expansion. As the Council observed, "... the question seldom asked is growth for what purpose?"

Since the city is the mainspring of our techno-industrial society, the maintenance of this dominant value system must be reflected in continued urbanization. Growth is viewed as inevitable and, by implication, morally good and socially desirable. The basic role of public agencies under these circumstances is to provide services and infra-structure to support and encourage urban growth, and therefore economic development. If this brand of economic determinism is in fact the implicit superordinate goal of urban development throughout Canada, then a responsive rather than allocative function of urban policy should prevail. That it should was suggested recently by the Economic Council of Canada:

"... under present circumstances, current (urban) policy can best be directed towards orderly growth and an improvement in the environment within Canada's presently expanding urban centres."

In other words, until more acceptable development criteria appear, policy should serve economic goals—providing education, roads, utilities—and tend to its victims—supplying public housing, welfare, protective services.

This ethos or philosophy underlying contemporary urbanization clearly places public policy in an auxiliary position to the forces of economic growth and prevents it from assuming a more positive role in rationalizing and ordering urban development. Consequently, urban policies generally are more piecemeal

than comprehensive, more pragmatic than anticipative, and short rather than long range. Furthermore, because individual public responses are not conceived within a general framework of urban goals, they tend to be developed ad hoc and to lack consistency. Public agencies tend to interpret "the public interest" narrowly in terms of their own interests and to promote policies accordingly.

Examples of this condition abound and everyone has his favourite examples, ranging from sequential street pavings and excavations to the more serious variety such as those that have occurred in Metro Toronto of late. Consider, for example, the recent enterprise of the Ontario Water Resources Commission, a provincial crown agency, in constructing an \$88 million sewer and water line from Lake Ontario to Chinguacousy Township to the north-west of Toronto. The service, according to officials of Chinguacousy, will permit a population in the southern half of the township of 560,000, thus totally altering the composition of a heretofore rural township by the introduction of a new town, Bramalea.

The result of the Commission's initiative must then be compared to the specifications for the same area laid down by the multi-million dollar Metropolitan Toronto and Region Transportation Study (MTARTS) whose publication coincided with the announcement of the Commission's plan. None of the MTARTS five model plans for urban development in its study area shows any significant population in the part of the township to be served by the line, and a maximum population projection for the year 2000 in Brampton was cited as only 100,000 to 200,000.

Throughout the country, development, whether of the mid-town, high-rise variety or suburban expansion into raw land, invariably is initiated by developers who secure municipal services, by one means or another, not according to a schedule established by public policy but by their mere force of presence.

These examples all refer to so-called "hard" services, but consider the effect on central cities of planning powers employed by suburban municipalities to "zone out" multiple occupancy tenants. Roads are built and one-way street systems installed to satisfy the criterion of mobility, not that of environmental amenity.

The list could be extended indefinitely to include preferential tax concessions to industry and parking lot operators, provincial and municipal subsidy of national parks in rural areas while city parks shrink before high-rise development, and more. Each of these disparate policies has an obvious impact not only on the physical configuration of cities, but on the quality of life within them.

Concern for this "ad hocery" might well focus on the difficulty of concerting public policy under such conditions. But hard as the formulation of goals and the systematic provision of services might be today, the situation can only become more acute in the future. Modern technology has had a profound effect on the process of policy making. Through simulation and data processing techniques, we now have the capability to relate to one another and to test large numbers of variables that previously were treated in isolation. As a result, to an increasing degree, public policy is coming to reflect a variety of functional

inputs that cut across established patterns of bureaucratic responsibility. The substantive need for coordination and integration increases in importance while institutional arrangements and programmatic concepts remain largely static.

The magnitude of the problem is reflected in the necessary involvement of different agencies of any provincial government that would be concerned with such a program as the creation of new towns or the substantial enlargement of existing ones:

Department of Municipal Affairs.....	planning and finance
Treasury.....	economic base
Provincial Housing Corporation.....	housing and land assembly
Provincial Water Authority.....	sewer and water services
Department of Education.....	schools and libraries
Department of Health.....	health services
Provincial Hospital Authority.....	hospitals
Department of Highways.....	highways and major roads
Power Authority.....	hydro services
Conservation Authority.....	parks and drainage
Many other agencies, of course, could be added.	

To sum up, urban development in Canada today is not guided by comprehensive, rational policies. It is impelled by a basic belief in the righteousness of economic expansion, and it is expressed in a willingness to accept growth as inevitable and indeed desirable. In the absence of any more explicit goals, urban policies tend to be pragmatic, piecemeal, and responsive rather than allocative in nature.

#### d) *The Urban Policy—Economic Development Policy Nexus*

The passive role assigned to government by the dominant values of the day is the primary factor which establishes its response to urbanization. Consequently, many prerequisites for the development of urban concepts and policies are not present.

One of these is the perception of urbanization itself by public authorities. Clearly, the inexorable trend towards an urban society in Canada has had nothing like the impact on private citizens and policy makers that is warranted by the phenomenon. This may be due to the agrarian traditions of the country that still dominate our legislatures, or to any number of other reasons. But whatever it may be, the implications of high density living in a society dominated by organizational life have not been grasped. The vagaries of "the hidden hand" apparently cannot be relied on to provide the physical surroundings, the amenities, and the human environment that highly specialized, interdependent urban dwellers require if they are to lead full, creative lives. Faced with an urban world, common sense and a recognition of social costs and benefits lead to the conclusion that the present remedial role of government, working in the interstices of economic initiative, will have to be replaced by a creative concept which anticipates and guides the forces of urban growth.



Assuming an adequate awareness of urbanization, the possibility of drafting effective urban policies is everywhere prevented by the absence of global development plans and policies. It is an exercise in futility to plan for cities in a vacuum. As noted above, urban development and economic development are highly interdependent components of the same system; economic planning and environmental planning are therefore simply obverse sides of the same coin. The relation is seen clearly in the process of planning. Since the position taken in this chapter is that effective urban policy must flow out of a general development strategy, a moment will be taken to describe such a strategy in order to show its relation to urban policy.

At the broadest level, the basic approach calls for the development of comprehensive provincial plans that are informed by and compatible with national strategies of social, economic, and physical development. Depending on the method adopted, plans for regions into which the province may be subdivided for planning purposes are prepared.

At the provincial level, plans comprise a series of strategic policies defining the nature, distribution, and timing of overall development. The plan enunciates provincial policy respecting such factors as population growth and manpower resources, energy and natural resource development, transportation, education, and agriculture. These substantive policies find expression in a complementary set of broadly defined instrumental policies respecting investment choices, budgetary priorities, taxation and financial incentives, urban development and supporting provincial institutional arrangements.

With such policies representing a broad "horizon" plan, regional plans serve to disaggregate the strategic provincial schemes and adapt them to regional conditions. Thus, a set of more specific policies defining regional economic and social goals, and the means of attaining them, form the basis of regional development planning. For example, regional policies might determine the general framework of population and employment growth, the nature and extent of major communications facilities, and broad policy objectives for major urban centres.

In addition, a further process of refinement and specification must occur. This is the expression of regional economic and social goals in terms of broad, *strategic* land use policies. It is at this point that the vital conversion process between economic and physical planning takes place and represents the connection or interface between the concepts of economic and environmental planning. The regional stage of the planning process consequently involves the translation of provincial policies into regional goals and also the conversion of these goals into a series of generalized land use allocations. The gross spatial distribution of population and employment growth is specified within the regions, as are the broad outlines of the communications network, target areas for recreation facilities, natural resources development and the like.

The planning process comprises a third element. This is the conversion of regional goals from strategic to tactical terms; that is, from generalized spatial concepts to specific designations of land uses and social policies. These functions are primarily concerned with physical and social planning and with the pro-

vision of cognate supporting services provided by local government. The final stage in the process gives practical expression to the broad goals defined by the provincial and regional plans. In many important respects, the work of urban government represents the "pay-off" of the comprehensive planning process.



## B. CURRENT URBAN POLICY IN CANADA

### a) *Barriers to Integrated Urban Policy*

Comprehensive planning thus represents an incremental and integrated process which has important implications for the realm of government. In the past, government could afford to be operated in many respects as a series of stratified and more or less discrete and relatively independent parts. Municipalities, special purpose bodies, provincial departments, and agencies could function as components of a loosely structured whole. But any intention to harness public policy to a set of comprehensive urban goals suggests the need for a new kind of vertical integration within the hierarchy of government and horizontal coordination within each tier. It replaces the existing concept of many semi-autonomous decision-making centres with one in which the machinery of government is an organic whole. If the activities of public authorities are to be directed towards the goal of maximum social and economic opportunity in the urban centres of Canada, they must be conducted in accordance with a comprehensive strategy designed to achieve consistency and common purpose.

A signal, if obvious, point emerges here: at the provincial level, economic planning presupposes the use of powers that the B.N.A. Act does not specify. The Federal Government has wide jurisdiction over economic and social problems, and implementation procedures which directly impinge on the nature of urban policies adopted by provinces. Because of this, planning must be stratified, but it also must be integrated. Clearly, the Federal Government plays an important part in the development of urban policy.

Comprehensive planning systems also provide a systematically derived rationale for discriminating among competing demands for public investment. Assuming the realities of urban growth and constraints upon public expenditure, available resources will have to be concentrated at the point of greatest need, in centres of urban growth. As previously suggested, this has never been a prominent part of the political lexicon and probably never can be as long as advocates of selective development have little more than intuition and political

rhetoric to justify their positions. Priority setting in a pluralist context tends to make the pork-barrel irresistible. Urban policies which embody growth point principles imply discrimination among national, provincial, and regional centres according to criteria of optimum socio-economic returns on investment. An overall systems approach provides the missing "explanatory framework" within which priorities can be established and choices made.

Another barrier to policy integration is raised by the chronic incongruence of responsibilities and revenue for urban-related problems.<sup>3</sup> The implicit results of these anomalies are legion, but here only one point which bears on the development of urban policy will be made. This condition has led to a steady shift of responsibilities upward from municipal authorities to provincial and federal levels of government. The transfers have involved primarily programs relating to human resources, particularly in the broad fields of health, education, and welfare. In an increasingly mobile society, there are obvious advantages to this procedure. But there are also disadvantages. One is that as responsibility rises through the hierarchy of government, programs become more distant from the people for whom they are intended and at the same time more stereotyped, more routinized, and less adaptable to unique local (urban) conditions. Furthermore, as Gresham's law of administration prescribes, routine activity tends to displace policy formation. Senior governments become preoccupied with the former and neglect the latter, creating a situation which obstructs the integration of human resource policy with other complementary aspects of urban policy. The divergence of financial resources and functional responsibility fragments the broad range of urban programs in a way which diffuses attention and prevents a comprehensive approach to policy development.

A somewhat similar effect results from the institutional fragmentation—and deficiencies—of urban and provincial governments. Institutional fragmentation is inimical to economic planning and, by definition, to the development of urban policy. This is true at all levels of government, but for present purposes, the discussion is limited to provincial and local levels.

The primary function of the provincial government in the planning process is to define goals and to formulate coordinated sets of instrumental policies respecting the programs of its departments and agencies. This involves at least two major phases of activity. One is the development of policies respecting such aggregates and sectors as industrial location, population distribution, transportation, natural resource development, and energy. The second phase is to draw out of the resulting matrix an integrated set of policies that best approximates the government's goals of maximizing economic growth and social opportunity. These policies, which represent the broad parameters for provincial development and urban policy, specify the nature and extent of contributions to be made, in the first instance, by departments of the provincial government, and then by regional and municipal authorities.

Both phases require special institutional machinery to achieve the necessary level of horizontal integration and coordination. On the highest plane,

<sup>3</sup> See Research Monograph No. 4.

the Cabinet and its committees play an obvious role in this respect. But beneath this level, primary responsibility should be centralized in a single agency. For the first phase activity, the development of broad policy goals, the coordinating agency must be in a position to offer the Cabinet alternative policies that reflect various contributions by functional departments. Depending on the choice made, the forward planning and operational programs of individual departments are governed accordingly.

This function is unique in that it demands a degree of coordination that is not now a feature of provincial bureaucracy. Strong formal powers are needed to offset the centripetal tendencies of an organization arranged primarily on functional lines. Consequently, a general purpose agency is required to exercise leadership and coordination at the level of the provincial public service.

The problems associated with urban areas and the requirements for effective policy development can be perceived in somewhat similar terms. The functional division of provincial governments has a counterpart in the areal division of governments in many metropolitan areas. A diffusion of policy-making competence characterizes both systems (recognizing the realities of Cabinet control) and problems of power aggregation are similar. Where two-tier metropolitan governments exist, the problem is reduced by the creation of a mechanism capable of developing comprehensive policies in both areal and functional terms. Again, horizontal coordination is possible.

Clearly, at both levels of government, fragmentation inhibits the development of concepts and impairs the functional competence that is required for the formation of urban policies.

### *b) A Review of Urban Policy in the Provinces*

Assuming the passive public role in urban development and the administrative obstacles standing in the path of change, prospects for rapid development of urban policy do not appear to be bright. But some very tentative and, as yet, very restricted changes can be detected. Gradually, concepts and machinery are developing which suggest that a new approach in the application of policy to cities may be evolving.

As the following summary survey of developments across Canada indicates, changes are in no sense uniform. In neither geographic incidence nor basic approach is there much consistency. Furthermore, among those provinces where there is a hint of change, the significance of what is occurring in terms of the future concentration of urban population varies enormously. In this connection, it might be recalled that urban growth is expected to be concentrated in the Toronto-Montreal corridor and Vancouver. The Economic Council of Canada forecasts that about one-third of all Canadians (or two-fifths of the projected urban population of the country) will live in these three centres by 1980. The remaining city dwellers will be distributed primarily among six second-order and twenty third-order centres; the former comprising 3.6 million and the latter 3.5 million residents, together less than the total population of the three metropolises.



## (i) BRITISH COLUMBIA

Urban policy in British Columbia applies to about one and a quarter million people and a very small proportion of the total area of the province. Only one-half of one per cent of the land area is municipally organized. About 80% of the provincial population resides in the Greater Vancouver area. The city's anticipated emergence as one of the three great metropolises in Canada makes urban policy in the province particularly significant.

To date, progress has been slow. There is no comprehensive provincial development policy, nor is there effective machinery for the initiation of such policy. The Government has, however, launched a loose regional planning system. Any area of land that is municipally organized may be incorporated into a regional district; or by petition to the Provincial Government, may be designated a regional planning area. The units are governed, respectively, by a Regional Board, composed of members appointed by the constituent municipalities, or by a Regional Planning Board. Both Boards are required to prepare a regional plan, and the Regional Planning Board may adopt such a plan as the official one for the area. A prior plan of a Regional Board is automatically superseded by that of a Regional Planning Board.

Under either system, responsibility for preparing and adopting regional plans is vested in a type of "super-council". Constituent municipalities are prohibited from making by-laws or initiating projects that would conflict with the objectives of an official regional plan. The weight assigned to votes of members of both Boards is proportional to the populations of the municipalities they represent. The number of official regional plans currently in force is not known, but in late 1968, there was only one.

The Greater Vancouver area presents a unique problem which urgently requires solution through rigorous urban planning. The City of Vancouver itself occupies only 44 square miles and contains a population of 460,000. Surrounding it are a score of municipalities, each governed independently. The area has a total population of one million, clustered untidily at the mouth of the Fraser River.

The extensive fragmentation of governments in the Lower Mainland has totally prevented the coordination of urban development. The confusion has been confounded recently by the dissolution of the Lower Mainland Regional Planning Board, which covered most of the surrounding municipalities, and its replacement by four Regional Districts. The central urban complex is organized into the Greater Vancouver Regional District, the Greater Vancouver Regional Hospital District, the Greater Vancouver Water District, and the Greater Vancouver Sewerage and Drainage District. Not all municipalities are in all organizations. Although the Regional Board can undertake whatever programs its members decide, subject to Provincial Government approval, so far no program has been put forward.

Because of the complete domination of the province by Greater Vancouver in urban terms, at this time the primary task of urban policy is not to discriminate among potential centres of growth. Rather, it must concentrate on the social, physical, and institutional development of the area. To date, the

Province has neither announced plans nor initiated studies leading to the development of a provincial urban policy.

## (ii) PRAIRIE PROVINCES

Here again, no active programs of provincial planning are evident out of which could emerge comprehensive urban policies. In default of explicit goals, the objective appears to be the maximization of growth of the five nodal cities of the three provinces.

The well-known system of regional planning commissions in Alberta is not an expression of general development planning. In fact, as the commissions have no legislative powers to enforce by direct land use regulation the implementation of their own plans, they have functioned primarily on an ad hoc basis as advisory planning bodies to the municipalities.

In one sense, a rationalization of rural local government as represented by counties in Alberta conflicts with an urban-centred policy in as much as upgrading rural services reduces incentives to migrate to urban centres. But a countervailing tendency may emerge from a study recently proposed at a meeting of 10 mayors in the province and provincial officials that is intended to provide "a blueprint covering the needs of metropolitan areas for the next three decades". Studies are to be made of the stimulation of growth areas in Alberta, coordination of provincial and municipal activities, size and quality of cities, provincial finances, and pollution.

Manitoba and Saskatchewan are at roughly the same stage in policy making, though they lack the institutional strength of the Alberta county system that could provide the basis of a regional economic planning system. In Manitoba, a form of regional planning and development is occurring in the Interlake area but that was largely on the initiative of the Federal Government under the former FRED program. A general provincial policy may be in the making, however. The Local Government Boundaries Commission of Manitoba is reported to have prepared studies which, building on the *Report of the Commission on Targets for Economic Development*, allocate economic activity and urban growth throughout the province.

Recent changes in the executive structure of the Manitoba Government have provided the form through which comprehensive provincial and urban policies may be developed. In 1969, a Planning and Priorities Committee of the Cabinet, chaired by the Premier, was established to supervise the formation, by a strong Secretariat, of broad provincial development strategies and to coordinate the overall operation of government programs. It appears that the Government is under some pressure to develop urban policy, and a reorganized Secretariat soon may start work on "policy clusters" out of which will emerge policies respecting urban, regional economic, and human resources. Under active consideration as well is a Provincial Department of Urban Affairs.

In 1968, the Saskatchewan Planning Legislation Study, sponsored by CMHC and the Saskatchewan Department of Municipal Affairs, proposed the adoption of an integrated local, regional, and provincial planning concept.



Apparently, the recommendations of the study have not yet been carried forward into legislation. No further developments appear to be under way.

For major urban areas in the prairies, the thrust of government policy seems to be to encourage growth of the major cities and to support it—albeit with a substantial time lag—with necessary institutional arrangements and infrastructure. The sanction by the Government of Alberta of CBD redevelopment in Edmonton, a transportation plan, recent annexations and land bank program all help to accommodate anticipated urban development.

Metro Winnipeg provides an institutional framework capable of accommodating urban growth in Manitoba for some time to come and, as such, could be thought of as an expression of the Provincial Government's policy for urban growth. In practice, however, it was not conceived in this context and remains as an isolated solution to the provincial development problem.

Overall, urban development in the prairie provinces is an ad hoc process in which public policy is significant only insofar as it supports the growth of cities which is impelled in the first instance by other factors.

### (iii) ONTARIO

Because the present situation in Ontario is very fluid, it is difficult to assess the prospects for development of urban policies. A considerable institutional structure for provincial, regional, and urban planning has been erected, a sea of studies undertaken, and goals and criteria relating to urban development proposed. But despite this, a question remains as to the real direction of Government policy. Since the overall picture is too complex to be detailed here, we will present a summary of developments.

From time to time, the Government has stated its intention to take the lead in provincial and urban development, by encouraging and directing social, economic, and physical planning within the overall framework of provincial growth policy. To this end, systematic studies of basic trends throughout the province and its regions have been undertaken and goals have been defined for different regions.

The institutional framework for urban planning is an elaborate system of Cabinet committees and senior officer committees intended to specify policy and to coordinate departments horizontally. In addition, several regional councils made up of appointed private notables and regional boards composed of field officers of the Provincial Government have developed regional plans which are designed to be integrated with a global provincial plan. The system is intended to produce provincial and regional policies which, on the one hand, discriminate among regions and their constituent rural and urban areas according to prescribed roles in overall development, and on the other, specify comprehensive public policy respecting urban areas.

In view of a program of urban government reorganization that is currently under way, it appears that provincial economic policy contemplates a growth point principle. But despite the fact that viable urban governments are essential to the effective application of comprehensive development programs, there

appears to be little correspondence between the two. So-called urban regions are being established without regard to existing economic planning regions. In Ontario, four urban centres—Ottawa, Lakehead, Niagara, and Toronto—now have scaled-up two-tier structures of government and reviews are under way or completed in half a dozen more. The Government has laid down a number of criteria for identifying major urban centres (such as population, community composition, area) and appears to be moving towards the establishment of a hierarchy of cities throughout the province.

Recent problems concerning the expansion of Metro Toronto or its encirclement by three new “metropolises” perhaps are symptomatic of the “state of the planning art” in Ontario. In recent months, the Minister of Municipal Affairs has steadfastly maintained that Metro shall not expand its boundaries, while quite recently the Prime Minister promised a complete reappraisal of its areas and responsibilities. At least in part, this seems to reflect a lack of clear concepts lying behind the provincial planning program. Urban policy for Metro Toronto must be an integral part of a broad development strategy for the province as a whole.

Ontario has gone further, sooner than other provinces in assembling the ingredients or prerequisites of urban policy, but as yet the whole has not jelled. If the Government’s declared intentions for provincial and regional planning are carried through, however, broad-based urban policies are a distinct possibility.

#### (iv) QUEBEC

The contemporary scene in Quebec is one of potentially radical change. On the one hand, the initiative of the Government in establishing the Montreal Urban Community and on the other, its likely adoption of recommendations of the *Report of the Provincial Commission on Town Planning* (La Haye Report) are very important developments. The following discussion is based on general principles developed in Volume One of the Report.

Reaching for precedent to France rather than North America, the La Haye Report places responsibility for the direction and nature of urban development and economic growth firmly in the realm of public policy. The Report concludes (and apparently the Government agrees) that the vagaries of economic determinism simply will not suffice in the world of 2000 when the province will be 90% urban.

In the past development in Quebec, probably to a greater extent than in any other province, has not been a subject of public policy. In contrast to past practice, the La Haye Commission favours the adoption of an organic concept of planning to be expressed within a comprehensive policy framework. This approach explicitly recognizes that urban planning will not function unless it is perceived as an integral part of a global economic planning strategy. The two are entirely interdependent; therefore, before the purpose, location, and quality of the main centres of urban life can be established, decisions must be made respecting the use and allocation of public resources throughout the province. Implicitly, because of its knowledge of global economic, demographic, and

social problems, the Provincial Government is the only body—public or private—capable of instituting rational standards of planned development.

The Commission also recognizes the important principle that economic and physical planning are simply different ways of interpreting the human condition. Economic planning aims to use all resources to the fullest capacity, while physical planning organizes a particular space in a rational way so as to ensure its best socio-economic use. From this, planning is conceived as a synthesis of all public policy and programs—social, physical, political, economic, and cultural.

In its institutional form, planning is part of a system of universal decision making, operating through integrated governmental machinery at local, regional, and provincial levels.

The radical nature of these proposals is obvious, though one should say radical in the context of North America. The Commission has laid out the most explicit and comprehensive statement of concepts and approaches to urban policy yet made in Canada. The outcome of this innovative thrust, of course, lies in the future.

The reorganization of Montreal—a notable development in the political history of the province—provides a political and administrative framework which is essential if the objects of the La Haye Report are adopted. A viable structure of government in the largest metropolitan area of the country obviously strengthens the prospects of national as well as provincial urban policy.

#### (v) THE ATLANTIC PROVINCES

In the four Atlantic provinces, the Federal Government working under ARDA and FRED agreements has stimulated much of the existing provincial planning consciousness. Newfoundland has adopted a limited policy of selective growth (the municipalities involved are very small), as have New Brunswick (Saint John and Moncton) and Nova Scotia (Halifax-Dartmouth, Strait of Canso, industrial Cape Breton). None of these policies is framed within a general provincial growth program, though Nova Scotia appears to have moved in that direction.

The Nova Scotia Planning Act, 1969, the proclamation of which was supposed to occur in early 1970, creates a new planning system of substantial importance. The proposed system of regional planning expressed a three-level hierarchy of planning in which regional development plans are integrated with overall provincial development strategy, and municipal plans are prepared in relation to regional plans. The municipal plans integrate planning and capital budgeting into a single process. The Province may prepare a regional development plan containing a statement for economic and physical development of a designated region, and municipalities may be required to prepare within two years a municipal development plan in the context of the regional plan. The Province may contribute up to 50% of the cost of a municipal plan. A District Planning Commission, made up of representatives of municipal councils, may be established to act between the provincial and municipal levels. A Commission works with the Province in the preparation of the regional plan, and with the area municipalities on general planning matters.



This system, linked to a Provincial Committee on Planning and Programmes, has the capability to formulate broad strategic planning and produce integrated urban policy.

Governmental reform in New Brunswick, sparked by the Byrne Report, has moved slowly in the direction of provincial and regional planning. A loose local government system was supplemented by a system of twelve administrative regions, thereby strengthening the institutional base for the provision of local services. But planning was not a function intended for the regions. Since 1967, two district planning commissions have been established covering a relatively small area around Moncton and a very large area around Fredericton (1,500 square miles). The Community Planning Branch has plans for 10 more planning districts covering much of the most densely settled part of the province. Some form of institutional framework for regional planning might be established, which would be consistent with the philosophy of the Program of Equal Opportunity and also would be an extension of it. To date, however, there is little in the way of comprehensive urban policy in the province.

### *c) A Review of Urban Policy in Selected Cities*

#### (i) INTRODUCTION

The aim of this portion of the study is to determine the major problems of growth faced by civic officials in seven selected Canadian cities. The seven centres considered were Saint John, N.B., Westmount, Toronto, Winnipeg (Metro Corporation), Edmonton, Vancouver, and Victoria. Our material is based on interviews with senior civil servants in each of these centres. In addition, the chief planner for Nova Scotia was interviewed.

The following three questions were asked of the officials:

1. What do you see as the future for (the city) in a ten-fifteen year time span in terms of population growth, economic conditions, and development?
2. What policies could or should be adopted by (the city) to attain the goals as you see them in 1?
3. What type of assistance, if any, would you see as (a) necessary, or (b) desirable from senior levels of government to assist in the statement of these goals?

#### (ii) POPULATION AND HOUSING PROSPECTS

All these centres have faced problems of growth and expect to do so in the immediate future. The scale of problems varies greatly. In Victoria and Westmount growth problems will arise from greater density through high-rise development. In Greater Victoria the problems are less severe, for the District of Saanich has large amounts of raw land which are serviceable and available for development in single-family dwellings.

In five of the seven cities, there is an air of general optimism regarding future economic development. In Winnipeg, the mood is more cautiously optimistic; and in Westmount:

"It would be very difficult to forecast the future for the Province of Quebec; it

would be even more difficult to produce a valid ten to fifteen year forecast for the City of Montreal; it would be sheer crystal-ball gazing to predict events in that period of time for the City of Westmount."

Yet, in Westmount, possibly spurred by a new zoning by-law, and the opening of the Metro, substantial mixed, commercial, apartment, and office development of major proportions and quite high density is being experienced, primarily around the Alexis Nihon Plaza at the Atwater Terminus of the Metro and environs. The general attitude in Westmount City Hall is "wait and see", tinged with pessimism in the sense that things may "deteriorate" politically even more before there is an upward swing. In this light, the introduction of Bill 75, the Montreal Urban Community Act, in November 1969 by the Quebec Government is viewed with extreme anxiety and skepticism in terms of the fiscal and tax implications; representation, powers, and composition of the Executive Committee; and powers of the Public Security Council.

In Edmonton, housing in the coming years of growth should not present great problems. In early fall 1969, the Alberta Housing and Urban Renewal Corporation purchased approximately seven square miles of land to the south of the city. By 1985, the area, easily serviced from the city, should house about 85,000 persons. Thus, with speculation in land for residential development checked, future prospects for growth are excellent. The housing scheme, coupled with the approval by the city of new plans for a mass transit system and for downtown office, apartment, and hotel developments, offers a bright outlook for Edmonton.

In contrast, in Metropolitan Toronto the mood is quiet. Here the Metropolitan Planning Board and the Metropolitan Council are trying to persuade the Provincial Government to relax its policy of "containment" and allow for urban expansion. It is estimated that available raw land within the boundaries of Metropolitan Toronto is not sufficient to provide new private family housing much beyond 1975. In any event, there is none available within the reach of four-fifths of the population. As a Metropolitan Planning Board Report dated September 17, 1969 states:

"Proper sites for public family housing in Metropolitan Toronto are already nearly exhausted while the demand continues to increase. To satisfy Metropolitan Toronto's request for 35,000 new units between 1971 and 1981, the Ontario Housing Corporation, which has already agreed to the request will undoubtedly be forced to seek sites in the community outside Metropolitan Toronto. Metropolitan Toronto, in fact, depends on the urban land resources of the entire Toronto community to meet its public housing needs."

This is not to suggest that the "boom" in Toronto is off. Certainly commercial, office, and hotel construction especially in the core city is proceeding at a rapid rate. The feeling is quite prevalent, outside Queen's Park, that Metropolitan Toronto should expand, at least to the east and north. Pickering Township, immediately adjacent to the east, appears to be willing and possibly eager to be absorbed. The Province's policy is to provide over time a series of regional governments ringing and constraining further expansion.

For Vancouver and the Lower Mainland Area, growth prospects are bright.



Within the area, there is little serviced land on the market; however, a great deal of raw serviceable land is available for development.

As we discussed earlier,<sup>4</sup> with the abolition of the Lower Mainland Planning Board and the creation of four Regional Districts, planning power has become fragmented. Two of the new regional districts, Greater Vancouver and Central Fraser Valley, have the bulk of the population. Of the two other regional districts, Dewdney Alouette and Fraser-Cheam, the former is likely to be influenced more by Lower Mainland growth. It will absorb a large proportion of the over-spill from the two major urban centres, the City of Vancouver and the District of Burnaby.

On the east coast, Saint John, N.B., for possibly the first time in its history, looks forward to a dynamic future. The comprehensive community plan for the city is approaching the approval stage, and the development of a containerization port is proceeding, as well as designation of Lorneville as a "super-port". Further impetus for growth will come from the selection of Saint John as one of the Maritime growth centres by the Federal Department of Regional Economic Expansion, and from the revitalization of the downtown area through urban renewal and expressway construction. In addition, as a result of the amalgamation of Lancaster and other areas into the city in 1967, ample serviceable land is available for development. About 50% of the basic underground services in the downtown area will need to be replaced or upgraded, however, to accommodate the anticipated redevelopment.

In Metropolitan Winnipeg, most growth has occurred in the suburbs where there are large amounts of serviceable land available. In an almost classic North American pattern, here has been an exodus of both residents and businesses from the downtown area. In some respects, the future of the city seems relatively bright, but there is a need for continued development of secondary manufacturing industries, and transformation from agricultural dependency to industrialization coupled with exploitation of the city's geographic position for transportation purposes. Expansion in Winnipeg may be stimulated by the fact that it has been designated a growth centre eligible for aid from the Department of Regional Economic Expansion. The major problem is the replanning of downtown Winnipeg. Already high-rise development is taking place downtown, and a Downtown Development Plan has been drawn up. Some feel, however, that Winnipeg's prospects are dim. It has been suggested that some industries may pull out of Winnipeg, and head offices for the grain industry may relocate on the west coast, leaving a token staff in the mid-West.

In summary, while prospects for growth in these seven cities look bright, further expansion is creating substantial problems. Funds for capital public works, sewers, water, roads and mass transit are needed in almost every centre, and there are increasing demands for capital for such services as public housing.

### (iii) POLICIES TO DEAL WITH GROWTH

When we examine the policies that are presently adopted or planned to meet problems arising from urban growth, we find them lacking in one important

<sup>4</sup> See Section (b), page 180.

respect. By the mechanism of an official plan, five-year capital budgets, and so on, each city has some sort of policy to deal with changes; but rarely are the goals clearly articulated.

The absence of specific goals can be explained in part by such factors as limited range of tax resources, lack of real politicization in the city, shortcomings of senior administrative personnel, and in some centres structural fragmentation of power.

Two coastal cities visited have similar problems but on a different scale. The downtown plan for Saint John envisages a drastic rebuilding of the core and construction of an expressway system, but little downtown residential high-rise development. In Victoria, on the other hand (provided that funds are available for urban renewal), some dramatic reconstruction along the inner harbour is contemplated combining apartment and commercial high-rise development. An integrated transportation system is planned in an attempt to offset the pull of large regional shopping centres in Saanich. Growth in Victoria is focussed on the tourist industry. Through restoration projects, the development of Centennial Square and Bastion Square, and attempts to develop a convention centre, the city hopes to strengthen its attractions and extend the season. In contrast, the goal of growth in Saint John is its intensive development as a port and transshipping centre.

In the two prairie cities, common goals exist. Both are concerned with sprawl, and both have transportation plans calling for mass transit. Winnipeg's concern, or at least that of the Metropolitan Corporation, is a revitalization of the downtown. (The City of Winnipeg has taken exception to some elements of the Plan, in part as a result of its differences with Metro on organizational matters.) In Edmonton, with the pressure taken off the speculative housing lot market, a quite steady flow of capital (some of it local) to build in the downtown, and plans already approved by the Council for rapid transit, the city seems to have articulated and acted on policies to meet future growth.

The problem of identifying goals and formulating policies to achieve them seems to intensify in the larger centres. In Greater Montreal, as a whole, financial difficulties for the City of Montreal, coupled with current political and social tensions, make long-term policy articulation difficult to achieve. The passage of the Montreal Urban Community Act is designed by the Province to offset some of these problems, though it is viewed in different terms by the surrounding municipalities. In the Greater Vancouver area, plagued for years with administrative fragmentation, the downtown core is under an intensive process of rebuilding. Transportation studies have identified a need for rapid transit and expressway construction, but the latter proposal is a subject of great controversy in terms of its location and of its long versus short-term desirability. In addition, the Provincial Government seems reluctant to assist the development of urban areas. In the absence of a rational grant system, long-term planning for the Greater Vancouver area is extremely difficult.

In Metropolitan Toronto, there is a planned program of northward extension of the subway system, construction of new cross-town lines, and extension (or limitation) of the network of expressways. On other transportation questions,

especially the issue of commuter travel, the Provincial Government has entered the picture with the GO system. The Metro Official Plan is slowly approaching completion, and the apartment density formula seems certain to continue the switch in living styles from single-family dwellings to multiple units.

In all seven cities, there appears to be a willingness to accept growth as inevitable and by implication as a "good thing". There is little talk, save in Toronto, about satellite cities to siphon off and accommodate overspill populations. Policy planning to meet the growth problems tends to be considered with a greater measure of sensitivity than it would have been, say, a decade ago. Urban renewal and clearance are obvious problems in all the cities, and there is at least awareness of the dangers of the old bulldozer approach.

#### (iv) ASSISTANCE FROM SENIOR GOVERNMENTS

Except for Westmount, all of the cities seem willing to consider the possibility of Federal Government aid for certain programs albeit with varying degrees of cautiousness.

Two of the cities visited (Saint John and Winnipeg) are covered by new legislation under the Federal Department of Regional Economic Expansion, and they look forward to the schemes. All cities stressed a need for some sort of articulated policy statement by Ottawa on its approaches to urban areas, with long-term guidelines rather than the start-stop method which has proved frustrating to the cities in the past. A key issue, of course, is how funds will be channelled to the city; and here many and various proposals have been put forward, from an arrangement of close cooperation with the province, to the creation of a separate public body to transmit funds from the Federal Government directly to the city.

The persistent matter of priority determination and the locus of responsibility when funds flow from one level to another is another issue which becomes vital. The consensus expressed by civic officials is that at the very least they should have the option to select programs from among priority choices that the granting body deems appropriate for aid. The Federal Government's role as a supplier of funds is recognized, but a repetition of restrictions such as *those* which apply to CMHC programs, is considered less than desirable. Clearly, "partnership" arrangements are viewed warily at the city level.

The one program area where there is universal agreement on the need and desirability for federal intervention and assistance is transportation. (On this issue Westmount is in harmony with the others.) The problem becomes more insistent in those cities now faced with the planning and development of a rapid transit (subway) system, especially Winnipeg and Edmonton. Such a scheme is at the discussion stage in Vancouver and, of course, Montreal and Toronto already have operating systems. There is little doubt that for the full development of expressway and rapid transit systems as envisaged by the respective transportation studies, sources of revenue outside the individual city will be required.<sup>5</sup>

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<sup>5</sup> See Chapter 4 and Research Monograph No. 3.



All areas also stress a very important point: although we can talk of an "urban problem" as being common to the nation, both the numbers involved and the concentration of urban centres indicate a difference in scale of the problem between specific areas. Therefore, a national policy to deal with urban matters must be both flexible and cognizant of the vast disparities that exist.

Administrative officials in the cities know that their only source of funds for major capital schemes is transfers from senior governments. Through a variety of grants, often not rationalized and seemingly uncoordinated as to policy intentions, most provincial governments are providing the major transfers. It would be stretching the point to suggest that federal intervention in urban areas will be welcomed wholeheartedly. Possibly the extensive delays built into present procedures for urban renewal tend to make those in the cities wary of federal grants-in-aid.

The political nature of our cities also affects government financing. The United States Conference of Mayors and Cities has been exercising a powerful force on the U.S. Government in this area; whereas the Canadian Federation of Mayors and Municipalities is less aggressive in its role as a lobby. Some form of federal assistance is inevitable, but on a wider base and possibly larger scale than in the past, if the country's urban areas are to develop into more agreeably habitable places. The key issue seems to be transportation. While experts may claim that centres of 500,000 or under cannot support rapid transit, systems are being developed in two Canadian cities of this scale. Rapid transit provides only part of an integrated urban transportation system.

In isolating one problem area for discussion, we are not suggesting that others are not in need of federal assistance. Such a narrowing of issues is one of the reasons for the failure of many programs under the National Housing Act.

As we mentioned earlier, civic officials seem distinctly wary of direct federal-city involvement. Nevertheless, after this hurdle is passed and the idea of more federal assistance is accepted (in whatever manner it may be provided), all stress the need for flexibility on the part of the donor government.

#### *d) A Review of Intergovernmental Operations*

The very great dissatisfaction over intergovernmental relations in the conduct of urban affairs in the past led us to inquire into the specific reasons for it. We approached the body most concerned with this problem, the Intergovernmental Committee on Urban and Regional Research,\* and a number of replies to specific questions were kindly prepared by the Committee. The highlights of those replies are listed below.

(i) WHAT HAS BEEN THE PROVINCIAL RESPONSE TO THE NATIONAL HOUSING ACT? . . . Looking at housing in Canada as a whole, it is evident that the National Housing Act and the agency administering it, have had a tremendous influence. This influence can be observed not only in the present form and appearance of our cities and towns, but also in the institutional framework that has been set up

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\* Special thanks to Mr. Emrik H. Suichies of ICURR are in order.

in the various jurisdictions to handle housing, and, indeed, in the way in which housing and housing problems are categorized and defined.

The Act is probably one of the best-known pieces of Federal legislation. While it has been subject to questions and criticism at various intervals, the great majority of these questions have related to the financial and administrative aspects of its provisions, rather than to its effect on urban form, functions and appearance. This is still very much the case today, particularly because under its influence housing has become a specialized operation in our overall development process and is looked after by specialized institutions. The organization of these institutions reflects the structure of the Act. The majority of the provincial housing agencies, are organized as microcosms of the Federal housing agency, regardless of the structure of their housing problems. They tend to operate independently, and their responsibilities tend to be "linear" (i.e. housing from A to Z).

The present differences between housing agencies in the provinces do not so much reflect basic differences in approach to "housing" as differences in manpower and financial resources each provincial government can, needs, or wishes to commit. In broad terms, the approach to housing in each of the provinces is predictable and implementation of housing programs from coast to coast can be summarized under a small number of specific sections of the National Housing Act.

This general picture may undergo some basic changes in the near future. These may be caused by the differences in housing requirements and problems in the various provinces, and the change in emphasis of the Federal regional economic disparities program now administered by the Department of Regional Economic Expansion. The effects of DREE programs in centres like Halifax-Dartmouth, Saint John, Winnipeg, etc. can only be anticipated at this time. The provinces concerned are actively involved in negotiations with the Department for financial and technical assistance covering all aspects of urban and regional development, including housing. They feel that if these negotiations succeed, housing for the first time, will be integrated in a systematic way with the overall development effort. It will be a more or less important part of a "network" approach and its integration into a comprehensive approach will significantly contribute to the chances of success of the overall development effort.

Against this general background the efforts of the various provinces in the housing field may be seen. The provinces do not consider it a favourable background, or one conducive to their circumstances.

In the Province of Newfoundland housing is rapidly becoming part of the overall development effort. It plays a key role in the Household Resettlement Program, and draws on funds provided under ARDA and FRED agreements, and NHA funds. The provincial housing corporation defines its housing need as urban, its housing problem as rural. Its efforts and investments are concentrated in the 7 growth centres defined under the Household Resettlement Program. It is interested in stimulating home-ownership (hence, emphasis on land assembly projects) because monthly subsidies on public housing (often in the



form of the single dwelling unit type) normally exceeds \$100. For the purpose of public housing, single family dwelling units are preferred in this province over row housing or other housing types because of their sale potential. Families relocating from outlying settlements (outports) into approved land assembly projects may be eligible for a \$3,000 grant in addition to regular resettlement grants. This considerable and unique subsidy towards home ownership is paid for 75 per cent by the Federal government (DREE). Public housing of the project type is only built in those locations where the price of land is too high for single family dwellings (only in St. John's and Cornerbrook).

In the Province of Nova Scotia, home ownership is also strongly stimulated by the provincial housing commission. The device employed here is cooperative housing. It is used throughout the province, even in and near the major urban centres. Public housing (NHA, Section 35a, c, d, e) is found to be expensive and used only in those instances where cooperative housing is not feasible. The Nova Scotia Housing Commission, which has existed for more than 35 years, is unique in that it is a provincial organization set up to deal with housing problems before the National Housing Act came on the scene. It seems to be the only pre-NHA group of this type in Canada.

Its major achievement has been the refinement of the housing cooperative to a practical and workable concept for the province. The National Housing Act has not always been useful to it, mainly because the Commission did not always see the need to insist on building and servicing standards acceptable to CMHC. The architectural and planning functions involved in housing, when seen in NHA context, are not performed by the Nova Scotia Housing Commission, but are handled by the Department of Municipal Affairs and other Departments. The values of self-help housing plans and schemes are widely appreciated by the provincial planners. This is borne out in the housing section of the Industrial Cape Breton study (January, 1969). The Commission has recently conceived a new variation on the self-help housing concept. It arranges for the construction of housing up to 60, 70, 80 per cent, etc. completion. The buyer agrees to finish the house and his labour may form all or part of the equity required. A low-interest loan (7 to 8 per cent) is also available to him. If requirements re construction standards, water and sewer services, etc., are met, NHA financial assistance may be made available under Section 40 of the Act.

In New Brunswick, as in Newfoundland and elsewhere, the Provincial Housing Corporation is organized in the NHA style. Most of the efforts of the Corporation are concentrated in 7 growth centres defined by it. The emphasis is on production. To help expedite the production of standard NHA mortgaged housing, the Corporation carries out land assembly projects in several centres. The production of public housing (and senior citizens' housing) is severely restricted because of the high cost attached to this type of housing—the average monthly subsidy hovers around \$120. The Province pays 50 per cent or 45 per cent of the operating losses, depending on the location of the project. A new Condominium Act was passed during the last session of the legislature and efforts may soon be expected starting the introduction of this type of housing in the Province.

It may be of interest to mention at this point that implementation of the plan prepared under the FRED agreement for Northeast New Brunswick has so far been severely hampered because the provisions made for housing under the plan proved inadequate. The only special provision in the agreement relating to housing is that the land and improvements of those households prepared to move to the approved reception centres in the region would be purchased by the Federal-Provincial partnership for a price up to \$100 per acre. No special provisions were made at the reception centres end, i.e. only standard NHA provisions applied. However, several of the municipalities selected as reception centres were unwilling or financially unable to pay for their share of providing municipal services to land suitable for housing projects of various types. In those cases where the municipalities were solvent and where the province was financially able to act, the long approval procedures involved in processing applications for NHA assistance caused the implementation phasing of the overall project to be seriously out of balance. Central Mortgage and Housing Corporation so far could not be induced to consider a housing program taking into account the special conditions and needs in this area.

In the Province of Prince Edward Island it is felt that one of the key factors on which the success of the new Economic Development Plan will hinge is the housing program. As in the case in Northeast New Brunswick, this program now represents no more than the basic NHA package without modifications or concessions. The Provincial and Federal planners spoken to expressed the fear that, unless special provisions for housing might be negotiated under the overall FRED agreement, the entire economic development effort must be expected to bear little fruit.

The Quebec Housing Corporation has recently signed a new agreement with the Federal government for housing assistance involving a large sum of money. We have not been back in this province since this agreement was signed, and do not know any details. During our first contacts, the Corporation's offices expressed the need for flexibility in providing different types of housing in areas with different characteristics. They feel that none of the present NHA programs are particularly suitable in the provision of either urban or rural housing. In this province, as is the case in most other provinces, the municipalities have to take the initiative and approach the Corporation for housing assistance. A large majority of Quebec municipalities are reluctant to consider public housing for financial and social reasons.<sup>6</sup> Consequently the Corporation has found this type of housing particularly hard to sell. Several of the Ontario Housing programs are being considered in Quebec for adaptation to the conditions in that province. As far as we know, none of these programs has reached the implementation stage yet.

Housing in Ontario is an urban problem. The Ontario Housing Corporation operates 7 different programs under the umbrella called "Home Ownership Made Easy". The most important programs are the Family Housing Program (public housing) and the Senior Citizens' Housing Program. These are low-

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<sup>6</sup> See Section (iii), page 199.

income housing programs. Other programs of importance are: land assembly, student housing, condominium housing, industrial housing, and community housing. Any of these programs can be activated only on municipal request. However, some liaison with the municipalities is carried out if the Corporation anticipates the need for housing in that municipality.

A change in the rental scale for public housing projects is being sought, allowing people having reached an income in excess of the previous maximum acceptable for public housing, to continue to live in public housing projects at a reasonable cost. This modification allows the Corporation to generate revenues that increase its capacity to build public housing. This change, which allows the same amount of funds to go further, also has been found to have desirable social implications.

The Corporation has recently started to experiment with selling public housing units to interested tenants. No results are available yet. Under its Land Assembly Program, serviced lots are offered on a lease-hold basis. Experience has shown that lease-hold is a popular means of obtaining a lot. Option to purchase after 5 years is available. The only program maintained by the Corporation that does not depend on requests by a municipality is the Land Assembly program. The Corporation acts on its own initiative in those areas where it anticipates housing needs. A number of very substantial land acquisitions (2,000 to 3,000 acres) has been completed. These will allow the Corporation to develop (under its control) complete new towns.

In Manitoba the housing program in urban areas is only just getting under way. Public housing is not wanted by the municipalities. Since the initiative for the construction of public housing lies with the municipality, not much is happening in this field. The Manitoba Housing Corporation attempts to stimulate municipalities to undertake studies of their housing needs. The first call for proposals for the construction of public housing in the city of Winnipeg has been published recently.

The Housing Corporation also runs a program called Remote Housing. This program is designed to provide housing for Métis and Indians who are not living on reserves. The Corporation has arranged for the design of a housing unit that can be built for approximately \$7,000. It hopes to build 100 units over the next two years. Central Mortgage and Housing Corporation has indicated that it may be prepared to finance 75 per cent of the construction cost of these houses if built in remote communities (designated). The units may be built by the people themselves, or by contractors. The \$200 equity can be obtained through labour input by the buyer. The Corporation will also be prepared to rent houses of this type. The rent may be as low as \$5 per month and will be based on ability to pay. In 15 years (no matter what the monthly payment is) the house will be the property of the resident. This plan has been worked out in cooperation with the Provincial Indian and Métis Federation.

Housing in Saskatchewan is looked after by the Housing and Urban Renewal Branch of the Department of Municipal Affairs. This province has also made considerable progress with its remote housing program. The architectural and layout standards of this type of housing is not up to CMHC's specifications.



It tends to be much cheaper than the housing for similar purposes by CMHC. The Federal agency is gradually moving towards the position where it will be prepared to make financial assistance available to housing constructed under this program.

In 1968, Saskatchewan started a new program under which 100 used houses were bought in its 2 major cities. This housing, which is paid for in part under Section 35a of the National Housing Act, is available on a rental basis to Indians and Métis moving into the two cities. The production of public housing has been restricted because of its costs to the province and the municipalities.

The Alberta Housing and Urban Renewal Corporation operates a remote housing program comparable to those in Saskatchewan and Manitoba. Its unique characteristic is its emphasis on social upgrading. The housing problem in the larger urban centres in Alberta is characterized by a severe shortage. The Corporation is actively engaged in obtaining and directing lending funds into areas outside Calgary and Edmonton. It is not interested in getting involved as a housing or land developer. Its experience is that the layout and architectural standards maintained by CMHC tend to make housing too expensive for most parts of the province. The Corporation has been using the proposal call method on projects of a size that can best be built by small contracting firms. It has been found that the smaller local firms, using their own designs and working drawings, are familiar with local construction techniques and local materials. Their production costs per unit are usually \$3,000 to \$5,000 below the costs they would have to charge if CMHC drawings and specifications were used. If CMHC does not wish to go along with a housing project sponsored by the province, the Corporation will go ahead on its own.

In British Columbia, the Province acts solely as financial administrative partner in most housing projects. It does not see the need to duplicate services provided by CMHC. The province will only consider a housing project or program in a municipality after municipal request. The first priority of the Housing and Urban Renewal Division of the Department of Municipal Affairs in this province is to stimulate private enterprise to provide housing. The province operates a home acquisition grant system which makes available a \$1,000 cash grant, or a second mortgage up to \$5,000 at a reduced rate, whichever is the most acceptable, for every person wishing to buy a new house.

There are now about 3,000 public housing units in B.C. The cost of this type of housing to the province and municipalities is considered unreasonably high. The Division has recently embarked on a program under which older houses are purchased and refurbished for the purposes of renting them as public housing. One pilot project containing 50 houses is now in operation. The program is hampered by a limited supply of older housing. Land assembly programs in this province are undertaken only on municipal request. Serviced lots provided by this program are sold at cost (usually considerably below market price). The province does not operate a program comparable to the remote housing program in Alberta, Saskatchewan and Manitoba.

The above description is only indicative of the activities of the various provinces in housing. However, it makes clear that each province has attempted

to design programs and schemes supplementing whatever is available to it under the provisions of the National Housing Act. In each province, the opinion was expressed that the blanket type of arrangement provided under the National Housing Act is inadequate and may be discriminating. Its effect is reduced by cumbersome procedural and administrative arrangements.

Comments are also freely available with respect to urban renewal assistance available under the National Housing Act. It is particularly in this field that serious differences in opinion may be observed between the provincial housing staff and Central Mortgage and Housing Corporation personnel. Imaginative (non-NHA sponsored) urban renewal is presently under way in Nova Scotia (Downtown Paint-Up Campaign), and in Winnipeg. The Downtown Paint-Up Campaign project (some descriptive material is now available) has shown remarkable success in some urban centres, and has been a failure in others. The key to success or failure has been traced to the quality of local leadership. The Winnipeg approach is based on encouraging private enterprise to build high density residential developments in the downtown area. A detailed downtown plan has recently been published by the Metropolitan Winnipeg Planning Division (A. E. Levin, Director).

(ii) HOW HAVE WORKING RELATIONSHIPS DEVELOPED BETWEEN PROVINCIAL AND METRO GOVERNMENTS?

... In the Province of Quebec, a municipality may, in combination with one or more municipalities, create a housing bureau. These bureaus are non-profit corporations responsible for subsidized low-income housing in a particular municipality. (Quebec Housing Corporation Act, Section 55-4). Thus far, no multi-municipal housing bureaus have been set up (by the municipalities).

The Montreal Urban Community Act (Bill 75), introduced recently in the Provincial Legislature, and similar pieces of legislation to be introduced shortly for Quebec City and Hull, may cause Section 55-4 of the Housing Corporation Act to be activated. Under this legislation, the new Montreal Urban Community Corporation will be responsible for certain municipal functions which, if approved by the Urban Community Corporation's Executive, its Council and the Province, may include subsidized low-income housing.

The financial arrangements and types of programs that may be considered by an eventual multi-municipal housing bureau, will be influenced strongly by the provisions of the National Housing Act. This is also the case in Ontario. The Ontario Housing Corporation also must await municipal initiative before it can act. In the case of the Toronto area municipalities, this initiative is taken by the municipality of Metropolitan Toronto.

The OHC, which owns and operates all rent-to-income in the Province, bases its work in any municipality on studies of housing demand. These studies are usually carried out by the Corporation itself. In the case of Metro Toronto, a detailed housing demand study was completed (by a consultant) early in 1969. This study was paid for by Metro Toronto, CMHC, and the OHC. The municipality's request to the OHC for subsidized housing is based on an assessment of demand, as accepted by the municipality. The Corporation normally proposes



one or more sites and seeks the approval of Metro Toronto, or other municipalities, for construction on one or more of these sites. After approval has been obtained, the Corporation acts as developer.

The various OHC programs and techniques referred to in my letter of November 19, have province-wide applicability. However, several of these tend to be particularly effective in a metropolitan environment. About 10% of the housing stock in Metro Toronto now consists of rent-to-income housing owned and operated by the OHC (about 20,000 units—May 31, 1969).

The Corporation is considering the reintroduction of its "rent-certificate" plan. Under this plan, the OHC would rent all or part of an apartment building and pay the owner an agreed monthly rent. The OHC would then rent the individual apartments on a rent-to-income basis. This program, which may be effective only under housing surplus conditions, was tried in the early '60's in Ontario. The Federal Government at that time was not prepared to share the costs of the subsidies involved. In its recent brief to the Special Senate Committee on Poverty, CMHC seems to be exploring the possibilities of the concept of a "housing allowance" or cash transfer payment that may have effects similar to the rent certificate plan.

The OHC is also associated with condominium developments in Metro Toronto. It provides the site for these projects and limits the prices of dwelling units that may be built on this land. The building and marketing is handled by a developer whose project design has been accepted by the Corporation. The OHC takes back a second mortgage on the site and, by accepting payment for the land over an extended period of time at 8% interest, eliminates land costs from the down payment.

In Manitoba, the initiative is also with the municipality. Housing demand and needs are determined by the municipality and the role played by the Manitoba Housing & Renewal Corporation is to stimulate such studies. Low-income housing in the urban centres of Manitoba is built under the provisions of the National Housing Act, Sections 35 (a) or (d).

The MHRC is presently negotiating with CMHC for approval of its sponsored housing program. Under this program, housing for elderly people is built by the Corporation on behalf of a sponsor (service club, church, etc.). The sponsor makes available up to 20% of the capital costs of a project proposed (10% plus the land, or 20%). The MHRC invests this amount and applies the interest generated during the life of the project (50 years) against the operational expenditures. After 50 years, the sponsor will own the project. If any money of the original 20% is left after 50 years, it is also returned to the sponsor. In this type of arrangement, the MHRC enters into an agreement with CMHC.

In Alberta, the municipalities are responsible for housing demand studies. They normally have an indication of the need for housing because they maintain waiting lists and other records relating to the supply and availability of low-income housing in their jurisdiction. Studies of housing needs include considerations regarding location, densities, land costs, age and children content, etc. Location of low-income housing projects is usually determined by the municipality and it may use land that it has available as all or part of its equity in the project.

When a municipality has completed a housing need survey, it will contact the Alberta Housing and Urban Renewal Corporation (AHURC) which examines the survey, studies proposals made by the municipality, and brings in CMHC. The municipality may call for proposals for the construction of a number of dwelling units on its own land or on land owned by a developer. AHURC is available for consultation, will help to set out guidelines of specifications for a project, and will check calls for proposals and tenders submitted. The larger centers in the Province may decide their own housing needs, and call for proposals without AHURC approval of the guidelines or design specifications. However, for funding, the municipality has to apply to the Province (AHURC) and the Federal Government.

In British Columbia, low-income housing is a responsibility of individual municipalities. Under influence of the regional district organization in this Province, implementation of housing measures may soon take place on a metropolitan or regional scale. The Capital Region District (including Victoria and 6 other municipalities) and the Greater Vancouver Regional District (including 12 municipalities) are heavily urbanized. These districts may determine their low-income housing needs as part of their overall planning process. The costs of this housing are to be shared by all municipalities. If a specific municipality is not prepared to accept low-income housing development within its boundaries, it will be required to pay a proportionate share of low-income housing developments in other municipalities in the same district. The Housing Branch of the Department of Municipal Affairs becomes involved only on municipal request. Section 35 (a) of the National Housing Act is usually employed by municipalities in British Columbia for these developments . . . .

(iii) WHAT HAS BEEN THE PROVINCIAL-MUNICIPAL RESPONSE TO FEDERAL STRISS IN LOW INCOME HOUSING?

. . . Without exception, the agencies and departments responsible for low-income housing in their respective jurisdictions expressed difficulties in having municipalities accept this type of housing, or even the need for it. As is known, the reasons for this are financial, social and political.

In essence, only persuasion is available to the housing corporations, commissions, etc. in all provinces to make municipalities accept low-income housing within these boundaries. This can be achieved, as is demonstrated in Ontario. However, the difference between the OHC and, if we are well informed, all other housing agencies, is that it carries out the housing demand survey, or pays for it. The Metro study referred to in Section ii, was an exception in that it concerned a reasonably comprehensive study and funds came from other sources as well.

Formally, the OHC carries out this type of survey only on demand by a municipality. A well-staffed full-time research department is required to cater to the large numbers of this type of requests received by the Corporation. However, it is known that the OHC also takes the initiative and carries out demand surveys without having received a formal request. It is an active user of the Intergovernmental Committee's findings on projects, programs, etc. planned or under way in Ontario. The results of these surveys are used by the

Corporation in its dealings with municipalities. Their presentations, in several cases we know of, have been effective.

On the basis of the figures produced by the OHC, the municipality normally approaches the Corporation to assist in the construction of low-income rental housing. At present, the OHC cannot produce all the units it has been requested to provide, because of financial constraints. Other constraints include the unavailability of land in those areas where this type of housing is most required, the price of available land, etc. The Corporation has purchased several existing private housing developments (e.g. Flemingdon Park in Metro Toronto) for low-income rental housing purposes to meet part of the great need it has measured in some places.

Low-income rental housing is actively "sold" by the OHC to municipalities as part of an overall program (described in the letter of November 19, 1969). In several other provinces the waiting lists for existing low-income housing projects are used as measures of demand and acted upon by the municipalities involved and the province. In others, even this degree of quantification is not available at either the provincial or municipal level.

The lack of a sound quantitative definition of the low-income housing need in their jurisdiction seems to affect the aggressiveness of local and provincial governments in their attempt to cope with this need. Although the example of the OHC is now followed in some respects in other provinces, we are still not entirely clear as to why Ontario obtained almost all the Federal funds available for low-income housing construction in 1968.

The relative financial strength of the local and provincial governments may be an important factor in the case of lack of strength, but does not explain the virtual absence of low-income housing for rent in Winnipeg or Vancouver. It is our view that, within the overall OHC approach, its research department plays a key role. Its work forms an important element in the OHC-municipal relations, and allows the Corporation to deal effectively with the Federal Government. No such group or department is part of any other provincial housing agency.

The above observations concern only low-income housing for rent (public housing, NHA section 35). Outside Ontario there is very little of it. Quebec is now starting a major effort to try and catch up with Ontario in this field. For the Atlantic Provinces, this type of housing is expensive and, in many cases, a less desirable solution. The new government in Manitoba seems interested in making a new effort in this field (the Housing Corporation in this Province will be abolished and become a branch of the Municipal Affairs Department). The activities in Saskatchewan and British Columbia are limited or non-existent. Alberta is building on a limited scale, but has not yet developed an overall program.

## e) *The Federal Role in Urban Policy*

### (i) INTRODUCTION

In this section we will attempt to ascertain the role of the Federal Government in urban affairs. At first glance, this might appear to be an empty exercise.



Constitutionally, cities are the creatures of the provinces, and the federal role therein would be thought to be minimal; but this view, of course, is naive. The Federal Government plays two roles in urban Canada. One is a *policy role*, entailing the conduct of public policy that has either a direct or an indirect impact on urban Canada. Policies with direct impact include such areas as housing, where explicit urban programs—such as urban renewal, public housing, land assembly, and sewer treatment programs—are part of the arsenal. The indirect effect arises as a result of the fundamental interdependence of urban units and the economy. With primary responsibility for economic affairs—macro as well as micro—the Federal Government has a massive influence on the location, growth, and structure of individual urban areas and ultimately, on the urban system.

The second federal role is a completely passive one. It is based on the fact that to carry out its own duties, the Federal Government occupies a substantial amount of urban space. As a result, the use made of that space, the taxes paid, the urban demands created, the incomes earned by local employees, all combine to have an important influence on urban areas.

In this review of the various federal roles, because of the enormous variety of actions taken, policies carried out, and agencies involved, we have opted for a global approach. We do not attempt to measure the urban impact of every action under every policy of every federal agency. Rather, we shall survey the major interventions of the Federal Government and their overall effect, so that its actual and potential role might be more carefully assessed.

## (ii) FEDERAL POLICIES FOR THE CITIES

As we have already indicated, the Federal Government has had a very limited direct policy role in the cities. Only two agencies have had a clear urban focus: Central Mortgage and Housing Corporation and the National Capital Commission. One new agency is beginning to move towards an urban focus, and that is the Department of Regional Economic Expansion. We shall consider each of these in turn.

### *CMHC*

The role of CMHC has been discussed with regard to housing in Research Monograph No. 2. Here we shall point out only its more general urban policies. Perhaps the most controversial of all its programs is urban renewal.

Urban renewal is an orderly, coordinated activity, involving both private and public initiative and investment, for the purpose of improving living and working conditions. An urban renewal program can involve redevelopment, rehabilitation, and conservation used separately or in combination in designated areas. Urban renewal in Canada generally implies redevelopment; however, more recently, the concept has been broadened to include rehabilitation and conservation, two less drastic measures for improvement. Redevelopment is acquisition and clearance of blighted or sub-standard areas and the rebuilding of the areas in accordance with a comprehensive plan. Rehabilitation is applied to deteriorating areas not yet in need of redevelopment. It is the improvement

and repair of property by individual owners and public investment along with municipal action to improve community facilities. Conservation is prevention of deterioration of sound neighbourhoods by enforcement of occupancy, maintenance, and zoning by-laws by the municipality within the framework of an official plan. Thus urban renewal involves the replacing of deteriorated parts of a community, the repairing of unsound buildings or facilities, and the maintenance of sound parts.

The elimination of slums and blight is possibly the major target of any urban renewal program. A slum is an area in which housing and living conditions are sub-standard by reason of low-quality original construction, overcrowding, lack of maintenance, lack of sanitary facilities, and so on. Blight generally refers to the *process* by which a slum evolves, or an area or building becomes sub-standard. Urban renewal aims at clearing up these conditions and providing "decent, safe and sanitary housing accommodation at rentals that . . . are fair and reasonable having regard to the incomes of the persons to be dispossessed."<sup>7</sup> Since a slum houses and supports many low-income households, it is crucial in a scheme for the elimination of such an area that adequate housing be provided for those displaced at rents that they can afford. If this is not done, there will be increasing pressures on adjacent areas and new slums will be created through overcrowding.<sup>8</sup> The social costs (physical, psychological, sanitary) of slums and blight are high and thus they should be removed; but displacement and relocation are often physically and socially undesirable. Rehabilitation might be a solution, but unfortunately little attention has been paid to this alternative.

Another urban renewal goal is the enhancement of the municipal financial structure. Municipalities are motivated to participate in urban renewal projects for the purpose of broadening the tax base and thus increasing municipal revenues. Blighted areas provide low per capita contributions to taxes, while at the same time they frequently necessitate high outlays for services.

Federal housing legislation was introduced in Canada by the War Measures Act in 1918. Its main purpose was the construction of moderate cost housing. The Dominion Housing Act of 1935 contained no urban renewal legislation as such, although it did recognize a need to clear and redevelop overcrowded areas. The National Housing Act, 1938 specified the causes and effects of urban blight, but the first real redevelopment legislation was the National Housing Act, 1944. Grants could be made to municipalities for acquiring and clearing land suitable for low or moderate-cost housing projects, provided that the area was predominantly residential. Under this legislation Regent Park North, Toronto, was initiated as Canada's first major slum clearance and redevelopment project.

In 1946 the Central Mortgage and Housing Corporation, the federal agency responsible for housing, was created by an act of Parliament and was given jurisdiction over the National Housing Act.

<sup>7</sup> National Housing Act, 1954, Part III, Section 23(b) (i), p. 36.

<sup>8</sup> R. T. Adamson, "Housing Policy and Urban Renewal", in N. H. Lithwick and G. Paquet, eds., *op. cit.*



Amendments to the Act made in 1953 were of some significance in that they introduced a large degree of flexibility into the notion of redevelopment. Grants to municipalities for the clearance of slum areas were not restricted to those whose re-use would be solely "for a low cost or moderate cost rental housing project", but included those areas whose re-use encompassed "any federal, provincial or municipal public purpose". For the first time, the viability of an urban redevelopment scheme was evaluated with reference to the optimality of land use within the scheme. A second project was started under this legislation, in St. John's, Newfoundland.

The 1954 National Housing Act continued to emphasize slum clearance and redevelopment for housing. This new Act contained no new slum clearance legislation. The amendments of 1956 further loosened control over the final use of cleared land and pointed up the need to construct replacement dwellings for those destroyed by slum clearance. Now only a "substantial" part of a redeveloped area must be used for residential purposes. This was an additional step towards better, more efficient land use within the community. This amendment seemed to recognize the inadequacy of merely replacing blighted areas and implied the desirability of a more rounded program.

Under the 1954 Act, nine projects were undertaken as financial assistance was widened at a cost of \$17.3 million. Contributions from CMHC were available on a basis of one-half the actual acquisition and clearance costs rather than at estimated costs.

In 1960 the amendments passed introduced the concept of "urban renewal area" permitting a federal-provincial undertaking for the acquisition, improvement, and conversion of existing buildings for housing purposes. Thus an alternative to clearance was offered. Here an important transition was made from urban redevelopment in the restrictive sense to urban renewal in the broad sense. Finally, in 1964, amendments removed the restrictive residential requirement.

Present-day urban renewal legislation is contained in the National Housing Act, 1954 (amended) in Part III, Section 23. Urban renewal includes programs of redevelopment, rehabilitation, and conservation as defined above, requiring both public and private funds.

With respect to urban renewal, CMHC is expected to disseminate information regarding the availability of urban renewal assistance; and to receive, analyze, and process applications for federal contributions to provincial or municipal projects. Under Part V, Section 33 of The National Housing Act, 1954 (amended) grants of up to 75% of the cost of an urban renewal study may be made. These studies formulate boundaries for urban renewal schemes and the types of action required.

Federal contributions are available of up to 50% of the cost of all economic, social, and engineering research and necessary planning for the preparation of an urban renewal scheme (Section 23(a)). The scheme examines and makes specific proposals for particular areas as a result of the urban renewal study.

Under Section 23(b) of the Act, the Corporation may contribute one-half of the cost of the implementation of an urban renewal scheme approved by the

province and by the Corporation (at the same time sharing equally in the recoveries made from the project). Costs can include: acquiring and clearing lands and buildings; installing municipal works and services other than buildings; employing persons required in connection with acquisition and clearance, assistance to owners of property affected to adjust to the implementation of the scheme, or assistance in the relocation of the dispossessed persons.<sup>9</sup>

Under Section 23(c) of the Act, loans may be made to municipalities to finance up to two-thirds of their one-half of the expenditures involved in the implementation of the scheme.

Of significance too are the provisions for public housing under the Act, insofar as the availability of federal loans and grants may initiate an urban renewal scheme or aid in the relocation of dispossessed individuals.

In summation, developments in federal legislation have provided for an increasingly rounded approach to urban renewal within the context of a general community plan. The wider range of public policy choices (redevelopment, rehabilitation, and conservation) can complement the role of private enterprise in urban renewal and may contribute to the efficient economic and social use of urban land.

There have been problems in the administration of the federal program. The success—even the instigation—of urban renewal depends upon the initiative of the municipality concerned: it must apply for federal assistance. Despite a comprehensive educational program directed at the municipalities by the Corporation, this critical factor may not be realized. Municipal political considerations may deter renewal action;<sup>10</sup> the introduction of an unpopular urban renewal scheme entailing large disruptive effects may cost the enterprising administration a large segment of its popular support. But the ready availability of money under the NHA for the purpose of urban renewal studies and schemes should offset such political considerations and help to remedy ignorance of renewal goals and processes.

In addition to urban renewal, CMHC has played a major role in providing low-income housing. The major dimensions of that program are discussed in Research Monographs Nos. 1 and 2 and need not be repeated in detail here. Several general points should be made, however. First, the public housing program is essentially static: it lacks perspective in terms of needs, both among various groups within cities, and between cities. It is viewed on the one hand as an anti-poverty measure, and on the other as a means to improving the overall quality of the housing stock. The inherent conflict between these goals has produced a less than optimal program. High-quality housing is costly, for it necessitates high subsidies for low-income groups. To reduce costs, multiple units are built which are not appropriate for at least some of the urban poor (large families). Because of the overall costs, very few units are built, and this is particularly so in the poorest cities with the least available resources for participating in the program. If the goal is the reduction of poverty, it appears that

<sup>9</sup> The 1969 amendments permitted rehabilitation as well.

<sup>10</sup> See Section B (c), page 186.

such a program is inadequate: indeed, for many, outright income support programs may be both more efficient and more appropriate.

Newer programs, such as land assembly and sewers, also are of doubtful value. Land assembly at the fringe of the city is designed ostensibly to reduce land costs. It entails enormous resource outlays and the benefits accrue to those who can move there—generally those who are not poor, for they must be able to afford high transport costs. There are arguments for land assembly, particularly for planning purposes to direct future growth. But this technique is an extremely costly one in the light of currently available alternative policy instruments, such as zoning and the provision of public services.

Sewer loans are designed to help provide facilities so as to reduce one form of pollution. Why this aspect of pollution should be stressed is not clear. The greatest problems are in major metropolitan areas, and these generally are well served with sewage systems.

We must conclude that the role of CMHC has been a mixed one. A number of programs have been launched with various and often conflicting objectives. Of the greatest importance in dollar terms are urban renewal and public housing. Urban renewal—designed to eliminate blight—has led to the removal of more houses of low-income groups than have been built under public housing programs. The total urban effects of these programs have been overlooked, both at the planning stage and after completion of the projects. Alternative policies have not often enough been considered, and as a result there have been less than optimal returns on invested resources. CMHC seems to have assumed that housing can solve such complicated urban problems as slum development, poverty, sprawl, and pollution. As we have seen, this is far from the case.

### *The National Capital Commission*

This agency is unique in that it is concerned exclusively with one metropolitan area, Ottawa-Hull. Until recently, its major objective was to provide and improve open spaces in the region. The goal was almost exclusively aesthetic, and in most areas—the Gatineau and the Ottawa parkway system—the results are indeed pleasing. But they were not adequately conceived. One impact was to impose enormous costs on the urban areas by co-opting developmental land. This applied both to Hull (the Gatineau program) and to Ottawa (the Greenbelt program). Furthermore, the Greenbelt plan still is agrarian: it remains aesthetic in concept, despite the mounting evidence that it has raised land costs in Ottawa and has led to leap-frogging beyond the Greenbelt which has exacerbated the sprawl problem.

In brief, the agency that was most clearly given an urban mandate has, until very recently, proved unable to serve that mandate very efficiently. It has no urban policy that is very relevant, and it has not yet worked out a *modus vivendi* with the political bodies that are elected by the residents in the metropolitan areas.

### *Department of Regional Economic Expansion*

This Department is new, and its intentions appear to reflect some sensitivity to



urban reality. It is recognized that modern development necessarily entails urban development, and the Department has wisely reversed the thrust of earlier regional development programs to start development in non-viable areas. The attitude still appears to have strong spatial preferences, for too many non-viable centres have appeared among the designated areas. The process of understanding the urban areas has begun, and plans are being drawn up in a number of them. The urban system does not appear to have influenced the selection of cities and the planning process, however, and the long-term prospects for many of these areas may be exaggerated if this gap is not closed.

### (iii) POLICIES AND THE URBAN IMPACT

As we have already suggested, the mere pursuit of federal objectives necessarily has an enormous impact on urban areas. There is no *a priori* reason why this impact should be negative—indeed, much of the past economic policy has assisted the growth of cities and the welfare of their inhabitants. Our inquiry into the conduct of most relevant federal agencies, however, reveals that they are generally insensitive to the urban problems they help generate. Our interviews with and questionnaires to most agencies reveal that generally they are single-objective oriented, and that these objectives are set in Ottawa, without an urban perspective. The National Harbours Board, the Seaway Authority, the CNR, the Department of Transport in general, all have an enormous impact on the location, development, and deterioration of urban areas. Yet apart from occasional informational flows with local governments, these bodies engage in their respective activities without considering the cities at all. CMHC helps to build 200,000 homes a year, mostly in urban areas, with very little by way of evaluation of the urban impact of this major national program. Manpower and Regional Expansion programs encourage migration, which invariably has a major impact on key urban centres, yet that impact is rarely taken into account.

The fact is that these major activities, and to these we might add macro-policy as well, just do not entail urban awareness. Urban costs and benefits do not appear to get built into their cost-benefit decision-making calculus. It is useless to fault the individual agencies in this context, for they have been given no federal policy guidelines. It is the absence of a federal urban perspective that leads to the observed results. We are not now debating the case for an explicit federal urban policy—that is deferred to Sections C and D of this chapter. Even without an independent federal urban policy, these instruments should be used to help lower-level governments achieve *their* urban objectives, however badly articulated and poorly pursued they may be.

The real cost, then, of a lack of a general federal policy is the opportunity cost of not getting enough mileage out of our instruments. Airports could ameliorate rather than aggravate our urban problems. The railway system could be modified to serve urbanites, now that they dominate the national landscape. Migration policy could deal with the ultimate urban end of the pipeline as well as the initial rural end. Housing could be used to rationalize urban development, rather than expedite urban sprawl. Merely harnessing current federal policy potential could go a long way towards easing urban problems. A commitment



to do so within a set of explicit federal urban objectives would be of immense value to urban Canada.

(iv) THE FEDERAL PRESENCE IN THE CITIES

The final effect of the Federal Government on the urban system is the mere presence of its various agencies in urban units. The magnitude of its employment base and its payroll is indicated in *Table 32*. The labour income flow alone is substantial.

*Table 32*

FEDERAL GOVERNMENT DEPARTMENTS AND AGENCIES<sup>1</sup>

Employees including salaried, prevailing rate, ship officers and crews, and casual and total payrolls

	<i>Employees</i>	<i>Payroll</i>
HALIFAX.....	10,002	\$ 4,359,431
QUEBEC.....	4,762	2,104,931
MONTREAL.....	21,674	9,531,646
OTTAWA-HULL.....	56,302	30,228,150
TORONTO.....	17,141	7,692,099
HAMILTON.....	1,709	803,508
LONDON.....	4,139	1,731,454
WINDSOR.....	1,305	601,723
WINNIPEG.....	6,911	3,220,969
REGINA.....	2,270	1,095,040
CALGARY.....	3,272	1,502,110
EDMONTON.....	5,459	2,474,046
VANCOUVER.....	9,999	2,594,935

<sup>1</sup> As of September 30, 1967.

SOURCE: DBS Cat. No. 72-205, February 1969, *Federal Government Employment in Metropolitan Areas*.

In addition, we have estimates of the total grants in lieu of taxes and the total taxes paid by all federal departments and agencies to the 13 metropolitan areas and their school boards in a recent 12-month period (*Table 33*). Whether these grants are adequate substitutes for taxes—an issue debated by many municipalities—need not concern us here.<sup>11</sup> The point is that the Federal Government is a major “tax-paying” citizen in metropolitan areas.

More important is the space utilized by the Federal Government for these activities, since limited space is at the heart of the urban problem. We have been able to assemble estimates of federal land holdings and office space use in central cities of metropolitan areas, and these are contained in *Tables 34* and *35*. In about one-half of these areas, the federal land holdings are indeed substantial. To these data should be added the important CNR holdings, for they are typically downtown and very substantial.

Once again the problem is more one of opportunity costs than of direct costs, although occasionally the latter are considerable. The potential for using this space directly to assist orderly urban growth—through efficient land use, through mixed uses, or through designation to low-income housing—appears to be significant. The Cité du Havre plan for Montreal is one instance of such

<sup>11</sup> Although there is little excuse for the Federal Government underpaying its share of local taxes

an approach. In addition, the indirect use of space—to reduce pollution, to alleviate traffic congestion, to achieve aesthetic objectives—could contribute towards easing the more obvious urban ills.

#### f) *Summary and Conclusions*

Time has not permitted as thorough a review of the complex question of urban policy formation as we would have liked. This apparently is not a serious failing, however. The general absence of anything like an urban policy at all levels of government has been clearly indicated; and equally, there is no framework for urban policy formation. What we have is a variety of institutions operating in relative isolation at all levels of government. While there is no reason to doubt the sound intentions of these bodies, the net effect of such a chaotic approach has been a general failure to come to grips with the urban reality in which the nation now finds itself. As long as there are no agreed-upon goals, there can be no meaningful coordination. Battles are bound to continue over such matters as constitutional authority and revenue needs because there is no context for these discussions. A meaningful urban policy framework can be developed only in the light of a national consensus about the problem, the objectives, and the priorities. To date, there is no evidence that such a national urban policy is being contemplated, and the degenerative processes now under way in our major metropolitan areas are encountering a serious policy vacuum.

The inescapable conclusion is that of all our urban problems, the one most likely to deter any major improvement is our urban policy problem. Our first priority is thus not what urban policy to follow, but agreement that an urban policy is needed. If the point is obvious, and if we appear to be belabouring it, we do so because there has not yet been—in a society as highly urbanized as our own—a public recognition of this simple fact.

Our examination of the federal urban role has revealed that, in various ways, the Federal Government has a major impact on our urban system. Much of this impact is unintended; rather, it is the result of spin-offs from other-directed policies. Because most of Canadian society resides in urban units, and because most of the nation's activity necessarily takes place there, these side-effects are both substantial and widespread. Since the urban units are complex systems with severe problems, the effects of these interventions are more costly than is usually realized.

It appears that even an awareness of this impact would go a long way towards moderating its effect. More positively, these policies could be devised so as to include a deliberate urban role—a role that would assist in the pursuit of urban objectives, whether these be federal, provincial, local, or multi-level. Federal policies would then tend to move in the same direction as those of other levels of government, rather than intercepting and occasionally thwarting them, as at present. This potential will be explored more fully in subsequent sections of this chapter.

*Table 33*  
 Taxes and Grants in Lieu of Taxes Paid on Departmental and Agency  
 Properties to Municipal and School Authorities in Thirteen  
 Selected Census Metropolitan Areas

	General Grants in Lieu	Diplomatic Properties	Canadian National Railways <sup>2</sup>	Canadian Broadcasting Corporation	National Harbours Board	National Capital Commission	Central Mortgage and Housing	Seaway Authority	Grain Commissioners	Atomic Energy	Wheat Board	Canadian Overseas Tele- communications	Bank of Canada <sup>3</sup>	National Research Council	Air Canada	City Totals
Vancouver	1,910,000				416,102		93,841					12,000				2,431,943
Edmonton	710,000						295		54,843							765,138
Calgary	730,000						18,377		53,324							801,701
Regina	380,000						33,736									413,736
Winnipeg	2,290,000										189,424					2,479,424
Windsor	260,000						73,860									260,000
London	1,210,000						27,347									1,283,860
Hamilton	390,000						57,271									417,347
Toronto	4,770,000			199,065												5,026,336
Ottawa-Hull	9,890,000	340,000		134,835		1,109,264	199,160			184,005				117,000		11,974,264
Montreal	6,300,000		9,494,721	155,789	2,104,403		1,436,477	297,008				113,000			974,234	20,875,632
Quebec																
City	870,000				355,000		84,010									
Halifax	2,400,000				773,405		25,542							75,000		1,309,010
TOTALS	32,110,000	340,000	9,494,721	489,689	3,648,910	1,109,264	2,049,916	297,008	108,167	184,005	189,424	125,000	1,306,000	192,000	974,234	3,273,947
Total without Bank of Canada \$51,312,338.00																
Total with Bank of Canada \$52,618,338.00																

<sup>1</sup> Total agency figures, in some cases, are for calendar year 1969, and in others, for fiscal year 1968-69. Accordingly, individual figures should be considered as for "a recent twelve-month period." The totals are therefore discrepant.

<sup>2</sup> Figures for areas other than Montreal, not available at time of compilation.

<sup>3</sup> Grand total for all Bank property in Canada only figure available at time of compilation.

Prepared by P.H.A. Privy Council Office, March 9, 1970.

Table 34  
FEDERAL LAND HOLDINGS IN METROPOLITAN AREAS  
Site Area in Acres

	Halifax	Quebec City	Montreal	Ottawa	Toronto	Hamilton	London	Windsor	Winnipeg	Regina	Edmonton	Calgary	Vancouver	Total
AEL				4.9								27.4	—	4.9
AGR	.1		.3				20.8	.2	—		17.1		—	65.9
CBC	1.8	—	28.9	41.6	3.5			—	2.6	—	2.0	2.3	3.9	86.6
CMH	.3			153.3	7.0	—	—	—	.2	—	2.0	—	1.2	162.0
DDP														2.0
DND*	118.6	53.1	333.9	887.6	19.1	11.7	210.4 203.8	.6	346.6	12.7	47.7	205.4	72.5	2319.9 2313.3
DOT			.6					21.8		1207.0	26.3			1255.7
DPW	5.2	9.2	13.9	798.4	20.0	7.4	3.7	3.7	8.4	2.1	8.7	4.3	53.1	938.1
DVA	14.4		20.8	37.5			301.0				1.0	3.5	46.0	423.2
EAL														1.0
ELD				3.0										3.0
DMR	.1		.3	.2	.1			.5			10.5	15.7	.1	17.0
FOR														10.5
FRB	.5													.5
FSH	2.2													3.2
IAN	20.7	22.5 235.0	.1			2.0		.1	.1	101.0		.1	950.0	1096.5
NBC														235.0
NCC				2753.5										2753.5
NHB	216.2			429.8										216.2
NRC	1.6													431.4
NTC		.2			.1						.2			.2
RCM			344.9	2.7							.2	5.0	14.4	22.6
SEA														344.9
†Total	381.7	320.0	744.6	5112.5	49.8	21.1	535.9	26.9	357.9	1322.8	115.7	263.7	1141.2	10393.8
††Total	380.4	322.7	741.1	4780.1			529.3				113.7		1141.1	
V.L.	.7	1.9	370.5	394.8	.1	3.9	.6	—	.5	—	10.7	1.9	47.4	
L.U.W.	117.7	4.4	295.9	8.7	0	.2	0	—	0	—	0	0	.6	
U.V.L.	.7	1.9	74.6	386.1	.1	3.7	.6	—	.5	—	10.7	1.9	46.8	



- DND holdings are understated because of the destruction of records in a recent fire.

† Total as per DPW.

†† Totals from adding.

V.L. Vacant Land—Included under Vacant Land

—parking lots

—sites for buildings

—vacant lots

—Not included under Vacant Land

—park lands

—national historic sites

—roads

L.U.W. Land Under Water

U.V.L. Usable Vacant Land was determined by subtracting the land under water from the total amount of vacant land if the amount under water was part of the category considered vacant OR by considering all vacant land usable when land under water was not listed as part of the category considered vacant.

SOURCE: Department of Public Works, *Central Real Property Inventory*.

Table 35  
FEDERAL RENTAL SPACE IN METROPOLITAN AREAS  
GROSS FLOOR AREA

	Halifax	Quebec City	Montreal	Ottawa	Toronto	Hamilton	London	Windsor	Winnipeg	Regina	Edmonton	Calgary	Vancouver	Total
AEL	—	—	10,450	71,434	—	—	43,976	3,200	48,275	—	—	—	3,732	71,434
AGR	87,443	7,090	937,138	162,952	635,905	9,088	—	4,737	110,158	4,146	4,770	15,822	97,205	109,633
CBC	12,980	—	—	147,700	30,000	—	4,166	3,323	12,500	6,000	8,900	7,872	11,868	2,076,454
CMH	—	—	—	—	—	—	—	—	—	—	46,160	—	—	245,309
DDP	—	—	—	—	—	—	—	—	—	—	—	—	—	46,160
DND*	1,332,621	625,409	3,407,562	1,600,362	659,501	246,534	1,917,910	43,060	1,814,484	155,066	398,915	1,364,038	556,957	14,122,419
DOT	—	—	—	—	—	—	—	—	—	—	—	—	—	—
DPW	535,859	793,556	2,908,414	17,194,390	2,947,547	424,961	398,953	266,408	1,428,920	469,566	670,298	574,061	1,655,384	30,268,317
DVA	265,886	—	492,988	78,333	—	—	1,155,944	—	—	—	35,560	249,238	533,348	2,775,737
EAL	—	—	—	—	—	—	—	—	—	—	—	—	—	35,560
ELD	—	—	—	—	—	—	—	—	—	—	—	—	—	23,939
EMR	40	—	136	1,164	40	—	—	804	—	—	—	91,350	36	93,570
FOR	—	—	—	—	—	—	—	—	—	—	—	—	—	—
FRB	33,960	—	—	—	—	—	—	—	—	—	—	—	—	33,960
FSH	14,450	—	—	—	—	—	—	1,248	—	—	100	—	—	15,798
IAN	151,296	4,900	—	—	—	—	—	—	—	—	—	—	—	156,196
NBC	—	17,215	—	—	—	—	—	—	—	—	—	—	—	17,215
NCC	—	—	—	280,417	—	—	—	—	—	—	—	—	—	280,417
NHB	1,832,700	—	—	—	—	—	—	—	—	—	—	—	—	1,832,700
NRC	28,700	—	—	1,418,466	—	—	—	—	—	—	10,860	—	—	1,832,700
NTC	—	—	—	—	—	—	—	—	—	—	2,672	—	—	1,447,166
RCM	—	7,663	—	41,059	1,920	—	—	—	—	—	—	34,225	71,225	10,860
SEA	—	—	—	—	—	680,583	3,520,949	322,780	3,414,337	634,778	1,178,235	2,336,606	2,929,755	158,764
Total	4,295,935	1,455,833	7,756,688	21,020,216	4,274,913	680,583	3,520,949	322,780	3,414,337	634,778	1,178,235	2,336,606	2,929,755	53,821,608

## C. POLICY IN THE UNCONSTRAINED FUTURE

### a) *Introduction to Policy Analysis*

#### (i) THE MEANING OF THE UNCONSTRAINED FUTURE

The foregoing analysis has revealed that the complexity and intractability of urban problems appear to derive from their basis in the central processes of economic development and urbanization. Up to a point, this process is unquestionably a rational one—the benefits far outweigh the costs. Our evidence suggests, however, that beyond some critical point, not easily defined or measured, the interaction between size and rapid growth leads to an acceleration of costs primarily as a result of competing demands for scarce urban land.

This situation confronts the policy maker with a fundamental decision: to permit the process to evolve in an unconstrained manner, and to try to deal with the problems as they arise; or to attempt to intervene in this central process itself. The choice is not an easy one. The former has not been particularly successful in the past, but this reflects both the complexity of the problems and the extremely weak policy system for dealing with the problems. Major policy reforms must be effected if the present method of problem-solving is to achieve any positive results. The alternative of designing the future has the obvious advantage of dealing with causes, rather than effects, which immediately would appear to recommend it. But it is a higher risk approach. The precise relationships between variables are not fully known, and the costs and benefits arising from varying degrees of intervention are only dimly perceived at this time. Furthermore, the scope of institutional changes this method implies is bound to frighten off the faint-hearted. In other words, both the costs and the benefits of this approach appear to be higher.

In this and the following section we will explore each of these major alternatives in some depth. Within each we shall specify the dimensions of the most likely strategies open to the Federal Government, and their relative merits and demerits. The final choice will be left to those who must defend it before the Canadian public.

## (ii) THE DIMENSIONS OF POLICY REFORM

Any attempt to upgrade the policy system must begin with a view of policy needs. We have sketched the elements of a total policy system in the Introduction to this Report, and shall attempt to elaborate upon them here. It will be recalled that the three major policy components are the specification of objectives, the comprehension of constraints, and the development of strategies. How do these shed light on our current policy failings, and help us to design a more effective policy framework?

### *The specification of objectives*

We have seen that at no level of government is there a rational procedure for specifying urban objectives. This lack is due to the limited powers of local governments, and the absence of an urban perspective at higher levels. At present, policy is essentially a matter of dealing with problems as they arise. No rationale is available for analyzing, evaluating, and ordering these actions except that of expediency. No integration of objectives on a multi-level basis has been attempted, with the result that each level of government tends to go its own way, on the basis of its own (implicit) priorities. No view of the urban system as a whole has been forthcoming at either the provincial or the federal level. Finally, there is no formal technique whereby the desires of urbanites can be transmitted into the policy system. This goes a long way in explaining the growing dissatisfaction of this group with the ability of the various political bodies to solve their most pressing problems.

Any policy reform will have to devise techniques for eliciting the desires of urbanites, for integrating them into the broader objectives of the various levels of government, and for aggregating all these desires into a coherent and feasible set of urban objectives.

### *The comprehension of constraints*

If the policy problem partially explains our failure to deal with urban problems, our research further indicates that there has not been a very clear understanding of the nature of these problems. The dimensions of several problems—poverty, housing, and transport—seem to be quite different from what the political system appears to have believed, judging by the actions taken and the statements made. Furthermore, in several key areas, such as local finance, the environment, and the human condition, there are little grounds for any strong statement on the policy problem because the data, as far as we have been able to ascertain, are not adequate to support such a statement.

Not only are the factual dimensions of the problems uncertain, but the causes and effects are generally badly perceived. This is because of the great interdependence among problems, and their intrinsic and intricate linkages with the urban systems—macro and micro—that are themselves not very clearly understood. This situation inevitably renders policies short-sighted and symptom-oriented, and would hold even if the dimensions of the problems were clearly documented.

This constitutes what we have called *the urban problem*. It is the failure to



appreciate the real system and the constraints that system imposes on policy making. We have attempted to sketch several of the dimensions of the urban system (see Chapters 1 and 2 of this Report), but are under no illusion that we have completely or even accurately portrayed that system.

It appears that a major requirement underlying a substantial policy reform will have to be a large-scale, output-oriented research program to more fully elaborate the properties, determinants, and mechanisms of the Canadian urban system.

### *The development of strategies*

Strategy is the allocation of effort along the lines suggested by the interplay between objectives and constraints. The fact that we have neither of the latter explains the lack of urban strategy.

With a program of urban policy reform, the techniques of strategy development will have to be considered. This entails the setting of specific goals, both short and long term, the allocation of responsibility for implementation among the relevant participants, the continued surveillance and evaluation of strategies being pursued, and the continual investigation of techniques to ensure improvement of the delivery system.

### (iii) THE TECHNOLOGY OF POLICY REFORM

On the basis of these interpretations of the urban policy problem, and on the assumption that we are seeking to develop an urban policy, national in scope and rational in approach, it appears that the following components of a policy system are required.

#### *A National Urban Council*

The need to formulate consistent, meaningful, and acceptable urban policy requires a formal structure operating on a continuing, effective basis. The institution that appears to be most useful in this context is a National Urban Council. It would be a forum where the interests of the various groups involved in the urban policy system could be presented, where objectives could be reconciled, and where feasible plans could be drawn up. The example of the French planning authority appears to be very relevant here. With all interests presented, a technical staff would be charged with the development of *consistent* long-term objectives. Within these objectives, short-term goals would be assessed and reconciled, and a number of alternative programs would be presented to the Council for final examination and selection. The advantage is clearly evident in the operation of the French plan; when agreement is reached, the various actors can be reasonably assured that the goals specified will be met. Without such agreement, the policy mix will be conflicting and contradictory, and the system will operate sub-optimally.

Of course, the Canadian situation requires several modifications. Strong regional differences and the unique role of the provinces must be recognized. One alternative would be to have a two-tier system. Regional councils would develop regional plans. The membership on these would consist of local federal officials (such as CMHC's regional officers), relevant provincial authorities, and

representatives of the relevant urban communities, both at the highest level and including particular local interest groups, which will necessarily vary in the different regions.

Above these councils would be the National Council, where regional and national objectives could be harmonized and integrated.

There are, of course, a number of possible variations of this basic model, but it is not useful to pursue them here. The essential point is that a vehicle such as this would provide the basis for the development of a rational, national urban view, without which we foresee little prospect of dealing effectively with our urban problems.

#### *An Urban Research Unit*

The second requirement—an understanding of the urban system—inevitably will require a large-scale urban research establishment. It will have to develop from scratch much of the information essential to the effective conduct of urban policy. It will also have to construct relevant models of the national urban system, so that the implications of policy for that system can be estimated. This institution can take a variety of forms, depending on monetary and manpower resources, and the specific orientation followed. Given the present lack of manpower, the first phase will likely require a highly co-ordinated process. This might provide a teaching function as well, so that over time, the institution can be regionalized, with each regional unit becoming expert in its specific area while the national unit concentrates on the macro-system.

#### *The delivery system*

The first two institutions are both obvious and unobjectionable innovations. No constitutional issues are involved, and the benefits to all concerned would appear to be substantial. The jurisdictional conflicts enter particularly at the level of designing appropriate delivery systems, and it is here that we shall have to explore the alternatives in depth. Because we are concerned with the federal role, we shall emphasize the options open to this level of government.

We are able to identify three basic alternatives or options available to the Federal Government that will permit some improvement. The first entails a minimal disruption of the present policy system, and seeks largely to improve the delivery capability of the Federal Government through a better identification of problems and a more imaginative use of available instruments to alleviate problems. The second option recognizes the interdependence of urban problems, and seeks to deal with this phenomenon by taking into account these interdependencies in the conduct of the federal role. This entails increased co-ordination and focus of all federal policies with an urban impact. The third option derives from the assumption that the present policy system is unable to cope effectively with these problems because of the non-functional division of legislative and spending power. The alternative of a major revision in powers is posed under this policy option.

## b) *Policy Option U-I: No Fundamental Change*

### (i) A STRATEGY FOR IMPROVING THE PRESENT DELIVERY SYSTEM

We have identified a number of weaknesses in the federal urban role that appear to be easily remedied without major institutional changes. Some stem basically from a lack of awareness of the impact of current federal policies on the urban system. These policies are not urban in intent, but because of their scope and scale—in terms of land holdings, construction activity, and commercial impact—have a major effect on the cities. If the urban objectives of the country, including those of the Federal Government which emerge from the integration process within the National Urban Council, could be imposed as constraints on these policies, the prospects for a positive urban impact on the city would increase immeasurably. Airports, railroad lines, government buildings, harbours, all would be developed with an eye to improving the urban system as well.

Other weaknesses in the federal role stem from the inadequate information and understanding now available on problems in urban areas where we have an explicit and direct involvement. Our analysis indicates that several problem areas have been handled less than adequately, and that a number of factors will aggravate these problems, some to a rather extreme point, in the unconstrained future. The following appear to be the most critical from the federal perspective.

#### *Poverty*

We noted in Research Monograph No. 1 that the conventional notions about the poor are not substantiated by the evidence we have been able to present. Rather than being typically a problem of unemployment or underemployment, poverty in urban areas is predominantly the situation of the aged and the handicapped—the unemployables. This is not to say that the relative incomes of the other groups are adequate, but to inject this issue into a serious attempt to deal with the most severe aspects of poverty is to ensure that a solution for the latter will not be sought with the urgency and effort required.

We have also found, in Chapter 4, that the old will come to represent a growing segment of society, as a result of greater longevity, earlier retirement, and the increasing obsolescence of skill. Present policy is inadequate to deal with the present and the future problem. Indeed, much of it is predicated upon transfers of resources, which, for the unemployable group, may be inappropriate. They lack access to and information about markets. Unable, as a result, to compete in the marketplace, they are forced to settle for higher-cost accommodation, goods, and services. What appears to be required is a whole range of community services tailored so as to overcome their constraints: specialized location and transport facilities, easy access to unique services such as clinics and recreational activity, and even domestic services. Furthermore, this ought to be provided without isolating them from the rest of the urban community. Some elements of our public housing program have been directed to this group, but as yet the full complement of needs has not been met because of the fragmentation of delivery and the hazy objectives of social policy.

For other segments among the poor, income transfers are probably best,



except in circumstances where a community already exists; but some basic services are urgently needed. The transfer of resources permits the family to optimize that mix of location, size, and quality that best suits its unique housing preferences. Since the cost of supplying new and appropriate units for families is quite high—especially if, by appropriate, we mean rejection of high-rise in its present form as the answer—the transfer approach is probably not only the most desirable, but also the most efficient.

By clearly identifying the target groups and their needs, it is possible to improve upon the present delivery system in this area.

### *Housing*

In Research Monograph No. 2 we saw that up to now the housing market has responded quite well to overall needs, particularly with the assistance of CMHC. Our forecasts in Chapter 4, however, provide some cause for concern. The mix of needs is going to shift back to single-family dwellings in line with our demographic structure. And this particular form of housing is extremely costly in urban terms, for it is land and transport intensive—the two scarce urban goods. The result will be a very rapid inflation of land costs, particularly since the bulk of the demand will be in major metropolitan areas, and the level of demand will reflect the large numbers created by the post-war baby boom. Furthermore, this process is not three or even two decades off; it is with us now in several cities—Toronto, Vancouver, and Hamilton in particular—and will be upon us shortly in most other big cities.

An appropriate policy response will require at least the following:

- (1) Massive amounts of mortgage money to finance these requirements.
- (2) A revolution in building styles and methods to conserve land.
- (3) An increasing public role to subsidize housing for the growing numbers who will be unable to acquire adequate facilities under these cost pressures. This assumes that the supply will not be able to exceed the demand over the period—a distinctly probable situation given the very substantial demands we have forecast.
- (4) A major breakthrough in reducing total urban transport costs.

### *Transport*

The findings of Research Monograph No. 3 and Chapter 4 of this Report reveal that massive new transport demands, centring on the automobile, will be facing us, *particularly in the next decade*. Unless there is a revolution in technology, which we judge to be unlikely, we can expect a further increase in the key problems of our cities that are the result of their auto-orientation. Attempts to deal with these growing demands will determine not only how the transport problem will be solved, but how effectively our other problems will be tackled. The federal role here is now minimal. Some improvements can be made by assisting commuter lines and mass transit systems, and correcting some of the imbalance where it exists. Further, in cities not yet structured by the automobile, subsidization in the early years of inadequate demand for new facilities may have a



long-run pay-off in terms of more rational overall urban development and structure.

### *Fiscal squeeze*

In Research Monograph No. 4, we found that the deficits of municipalities will likely increase substantially. Furthermore, the lack of resources may well be constraining, and probably in the future will prevent, the provision of important public services. It is clear that the solution to this dilemma will have to come largely from a more realistic tax system that provides greater revenue elasticity than the real property tax. In addition, the priorities among local, provincial, and federal urban objectives will have to be established on a total basis—perhaps in relation to the consultative process of the National Urban Council—so that appropriate fiscal arrangement might be made to permit the attainment of the most important urban needs.

Other problem areas may be just as important, and a federal role may be appropriate in those instances. But in our own research, we were unable to discover sufficient information on the dimensions of the problem, their causes, and their effects to prescribe a particular course of action. The need for fundamental research into such areas as the environment and the community would appear to be a most relevant federal objective at this time.

### (ii) EVALUATION

Our review of the steps that can be taken to deal with urban problems suggests that there is much to be done, and that the Federal Government can play a useful part even if its present role is not fundamentally changed. This entails essentially a greater *awareness* of urban reality, both on the part of those agencies that happen to have an indirect impact on the cities, and on the part of those more directly involved. Because the problems will be on a very large scale, these policies will entail very great resource requirements, which, in the end, may limit our ability to deal with the problems. Furthermore, even if our urban objectives are clarified, the delivery system necessarily will continue to be fragmented as at present. Housing and poverty will not be tackled as two interdependent aspects of the urban system, and overall efficiency of public policy will be severely reduced as a necessary consequence. This leads us to our second policy option.

## c) *Policy Option U-II: A Total Federal Approach*

### (i) A STRATEGY FOR RATIONALIZING THE FEDERAL URBAN ROLE

The next step in reforming our urban policy entails the need to integrate the federal delivery system so that policy is not only headed in the direction of our objectives, but operating complementarily permitting the various parts to reinforce each other in that task. The most obvious technique would be to set up a number of interdepartmental committees to encourage the development of greater awareness of each other's role. Our analysis of current interdepartmental committees suggests this is a generally ineffectual approach. Such

devices merely provide a forum for individual agencies to argue for their particular interests, rather than a focus on the more important common need. In the urban area, where the system is complex and highly interdependent, these failings inevitably would arise.

What is needed is a distinct spokesman for the Federal Government's urban objectives so that these objectives are always clearly articulated and promoted as a guide to the delivery of policy. All federal agencies with an urban impact would need to consider their policies in the light of these objectives, and the development of programs to meet these objectives would permit the authority to draw on various relevant agencies as a matter of priority, not courtesy. Conflicts between objectives of different agencies could be resolved at the Cabinet level, so that the urban interests would not be downplayed for lack of an appropriate level of input.

#### (ii) EVALUATION

This option is not a substitute for the first, but a technique for making it work more effectively. It not only strengthens the urban policy delivery system, but provides an appropriate vehicle for relating that delivery system to the federal presence on the National Urban Council. The spokesman will have not only the federal objectives to present, but the assurance that these objectives will be pursued in a rational and consistent manner.

### d) *Policy Option U-III: New Federal Role*

#### (i) RATIONALIZING NATIONAL URBAN POLICY

The most comprehensive approach to developing a federal role would involve a reconsideration of the whole policy system. We would seek to reallocate delivery functions—spending as well as legislative power—among levels of government in line with the “degree of publicness” of the various functions.<sup>12</sup> The federal role thus would entail the provision of national urban goods, the provincial role would include provincial urban goods, and so on through municipal and sub-municipal levels.

To some extent this process is already under way, although it is beginning from the bottom up. The growth of metropolitan governments is a response to the need for urban services that transcend narrow jurisdictional boundaries.<sup>13</sup> Because of the political in-fighting between some provinces and their major cities, the final form of the metropolitan governments is a compromise between functional requirements and the preservation of political power. In areas where the latter constraint has dominated, there has emerged a growing local desire to escape through such alternatives as city-provinces, with full and equivalent constitutional status.<sup>14</sup> The difficulty here is that if the boundaries of such

<sup>12</sup> See Research Monograph No. 4.

<sup>13</sup> Simon Miles, *Report of the Seminar-Conference Stage, of the Centennial Study and Training Programme on Metropolitan Problems*, Bureau of Municipal Research, Toronto, 1968. See also the many useful draft papers prepared for this program.

<sup>14</sup> See C. I. Jackson, *Environmental Regions of Canada, 1970 to 2000*, Base Study No. 3 for the PCO Environmental Study.

regions were wide enough to capture the whole urban field,<sup>15</sup> the remainder of the provinces would be economic backwaters with little functional relevance.

Our primary concern, however, is with the federal role. Our own research suggests that there is a crucial national dimension to the urban system intrinsically linked to the national economy, and that this aspect will expand as the links are strengthened through further polarization and exchange among poles.<sup>16</sup> The federal urban role in this perspective is concurrent with its responsibility for the national economy. The more we move into national economic planning, the more essential will be the need for associated spatial planning. Such specific matters as industrial location, inter-urban transport and communications, and inter-urban migration will be of direct federal concern. In contrast, a number of highly local functions, such as public housing, urban renewal, and even the location of federal facilities—post offices, other federal buildings, transport routes—will fall into the domain of local government.

Regrettably, our analysis of the urban public economy (Research Monograph No. 4) was unable to give us sufficient information to specify more fully the optimal multi-level fiscal arrangements, although some interesting clues are provided. Since this is necessarily a long-run option, involving complex constitutional reforms, there is time to launch a major research program on this specific question, so that the current factual gaps can begin to be filled.

#### (ii) EVALUATION

This last approach is theoretically the ideal solution. It seeks to establish the relevant political roles on the basis of purely functional analysis. Since the whole constitutional apparatus becomes a variable in this approach, and since that apparatus is not erected on purely functional terms, the ideal is necessarily subject to modification. Furthermore, the present state of our knowledge precludes even a specification of the ideal. These elements destroy neither the merits of the ideal approach, nor its relevance to the constitutional reforms presently under way. What they do call for is a major effort to provide us with the necessary evidence upon which any proposal for reform might be based.

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<sup>15</sup> See Chapter 1 of this Report.

<sup>16</sup> See Chapters 1, 2 of this Report and Section A of this chapter.

## D. THE URBAN FUTURE AS CHOICE

### a) *An Appraisal of the Unconstrained Future*

#### (i) THE COSTS OF UNCONSTRAINED URBANISM

Our analysis of the unconstrained future reveals that major transformations in Canadian urban society will take place. They will result from the further development of processes already under way, particularly the increased specialization and growing scale of modern economic activity. We have not dwelled on the many social ramifications of these forecasts that have come to engage the attention of futurists, such as the impact on family life, the evolution of international economic and political relations, the growing importance of leisure time and leisure activity, and so forth. In the first place our primary concern is with the dominant variables in the urban process; and second, the great lack of empirical evidence on these social processes makes such forecasts highly speculative.

From our narrower structural approach we have been able to indicate broad national urban trends in the unconstrained future: the growing polarization of economic activity in the major metropolitan areas, the shift towards labour-intensive service activity, the rapid population expansion to meet these demands, the increasing importance of in-migration as a source of this population and the consequent draining of rural and small urban areas, and the growing importance of inter-urban links which will reinforce the dominance of the largest elements in the macro-system.

This emerging urban pattern is most important, because our analysis has revealed that there are inherent contradictions in the process that are not sufficiently appreciated.

On the one hand, as we have noted, there will be apparently great economic benefits associated with this expansion. Real incomes will rise from 50 to 100% per capita, providing individuals with a greatly increased potential for acquiring an extremely wide range of goods and services. Greater productivity and higher incomes will permit more leisure activity. Much higher levels of



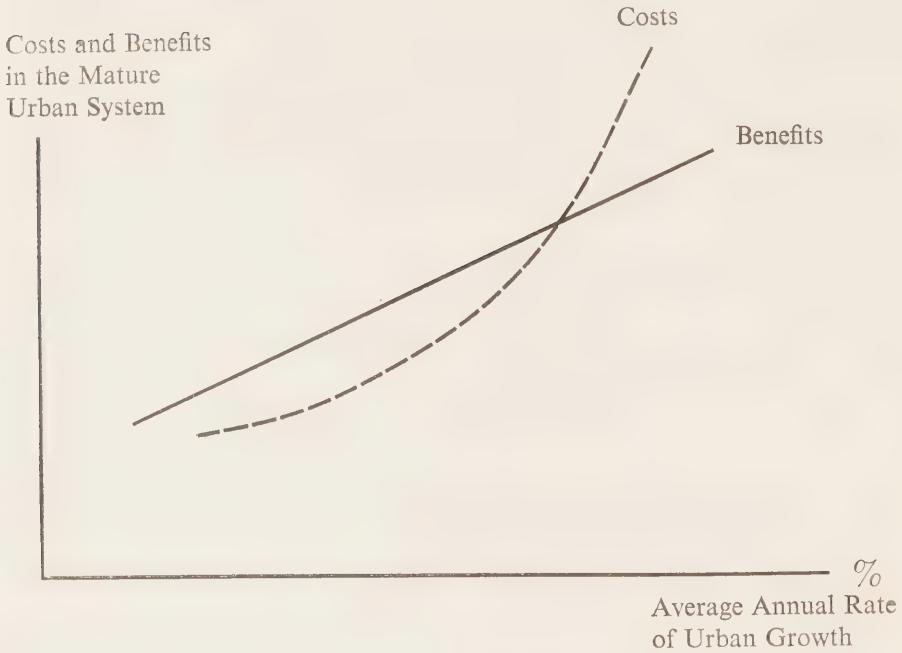
education will prevail, shaping the tastes of society in new and different ways. Access to more and different jobs and markets will be enhanced by improved transit and communications systems. All these developments will provide the individual with an enormous potential range of choice, not only of commodities, but of life styles themselves, permitting the attainment of individual and collective welfare beyond any level conceivable at present.

But this promise of greater individuality and real welfare is not unencumbered; attached to it are the inherent costs of the process of unconstrained development. These costs will certainly diminish the promised gains, and may in the end totally eliminate them. The growing polarization of urban society will impose an enormous burden on urban man.

- (1) Land will continue to become so costly as to preclude all but extremely dense residential development within reasonable distance from the core.
- (2) Families with children seeking single-family homes will have to commute for several hours per day.
- (3) Downtown areas will be congested, polluted, and noisy.
- (4) The drain on public funds to service the increasingly sprawled suburban areas and the increasingly intractable problems of the core will lead to higher taxes and yet higher land costs.
- (5) Industries will flee to the suburbs leaving the poor without access to jobs, and the inner city without a tax base.
- (6) Skilled workers will move increasingly to the suburbs with the jobs, reducing the quality of resident leadership in the core.
- (7) The growing number of firms necessarily located in the core will require white-collar, technologically sophisticated service employees. Their space needs will squeeze the urban poor even further.
- (8) The need to transport service workers to the core will add to the pressure on core space.
- (9) The steady erosion of stable neighbourhoods, the growing economic uncertainty facing core dwellers, and the deteriorating quality of their environment will create an increasingly explosive situation.
- (10) The increased segregation of economic classes in the city because of land costs will serve to fragment the community at a time when divisiveness is of great concern to the nation.

Thus, the cost of urbanization will rise along with the benefits. While the benefits will likely grow at a steady rate, the costs will grow exponentially because of the interdependency of urban problems, and their sensitivity to growth pressures which we have forecast to be extremely great. At some point these curves will cross, as we indicate in hypothetical terms in *Figure 9*.

*Figure 9*  
 URBANIZATION—COSTS AND BENEFITS



We have suggested, in the previous section, that current policy instruments could relieve parts of the problem areas. But this would entail essentially a continuation of the present approach, which attacks symptoms, not causes. Regardless of its effectiveness in the small, ultimately the approach is inadequate. Furthermore, because it fails to come to grips with the basic problem, which is the impact of the urbanization process on scarce land, the "solution" of certain problems may exacerbate others. Improvements in transport efficiency will accelerate suburbanization and hence the problems of local finance, as will a more efficient use of mortgage money for single-family dwellings.

The approach will fail because the exponentiality inherent in the costs of growth will lead to a steadily increasing need for public assistance which in the extreme will eliminate the potential gains from urban development. Thus, the apparent welfare gains will be illusory, for real income will be watered down by the inflationary pressures latent in the accelerating costs of the urban system, and chopped into by the taxes required to deal with the growing problems. Because of the interconnectedness of the national urban system, these costs

will not be restricted to individual urbanities in a particular problem area; they will get built into the whole range of exports and imports of the various centres. Because of the economic dominance of the largest centres, which of necessity also have the greatest urban problems, their high-level costs will be transmitted throughout the national economy. Such costs include the increasing cost of land, growing transport costs in the face of congestion as well as that part of the rising property tax burden that can be passed on to consumers, and the rising cost of labour for housing, that can be passed on by the metropolitan firms in the form of higher prices. In a highly competitive economy, these results could be offset. High costs would drive firms to cheaper locations. But the Canadian economy is far from competitive, particularly in the manufacture of urban goods. Tariffs and locational advantages have given firms, especially in the Montreal-Toronto corridor, a strong monopoly position. As a result, they do not have to adjust to rising costs, and indeed can easily pass them on. With further urban polarization, these monopolistic advantages will increase, so that the ability to impose the costs of urbanization on the rest of the nation will grow.

One possible adjustment might involve emigration from the major areas by wealthier, more mobile persons. While they could thus avoid some of the private costs of urbanization, however, the loss of these individuals would reduce the social benefits ascribable to agglomeration because of the major externalities they generate.

The implication is that unconstrained growth ultimately will not provide greater welfare through greater resources, but will require either an increasing share of those resources to deal with the costs of that type of growth or a reduction of the potential benefits of urbanization. The promises are thus not those of greater welfare and individuality, but of wasted resources and a growing oppressiveness of the urban system on individuals.

## (ii) THE PROBLEM OF RELEVANCE

Up to this point, we have accepted the urban system on its own terms, viewing the problems as necessary adjuncts of the evolution of that system. Our analysis has revealed that we have likely understated substantially the costs entailed in these problem areas. Certainly public policy has been unable to come to grips adequately with the major problem areas. The benefits and the costs of urbanization are inequitably distributed and the mechanisms for redistribution do not seem to work. The complexity of the problems – their deep-rootedness in the totality that is the urban system – means that solutions of a conventional sort have limited effect.

It is our conviction that the central problem of this approach to the unconstrained future, as we noted earlier in the Introduction, is that it forces us to accept the *inevitability* of a continuation of the processes inherent in the present. Because these processes are abstract and powerful, and have served the needs of those groups who have benefitted most, there is great pressure not to tamper with them. If it is wrong, at least it is familiar, and we can patch up some of the excesses through public policy.

That the urban system contains serious contradictions that frustrate the attainment of our present social goals has been demonstrated in the preceding analysis. We have touched on the impact of present unconstrained urbanization on poverty, on stabilization, on regional disparities, on national development, and on national identity. Furthermore, we have seen that the prospects for the unconstrained future appear to be, if anything, worse.

The major alternative open to us is to reject the central assumption that the future is inevitable—that we must, as a nation, passively adjust to its demands upon us. Rather, we must consider how we might possibly shape the future urban system so that it can serve our objectives, rather than thwart them.

This is not an easy task, and we do not pretend to have a complete answer. The major problem is that we do not really know what our future objectives will be. It is difficult, as we have already suggested, to anticipate the kinds of desires that society at large will have in the future. If the objectives of urban policy are to make city life a means to achieving these broader social goals, and these in turn are reflective of the desires of society, then it is extremely complex to postulate future urban goals from the vantage point of the present.

That is not to say that we have no notions of what our desires likely will be. It is possible again to extrapolate into the future from present trends, although here we have much less faith in our estimates. Thus, we shall merely list the major anticipated tendencies with no attempt to quantify them or to be exhaustive.

- (1) Higher incomes will lead to a greater increase in the *variety* of goods and services sought.
- (2) More education and more leisure time will reinforce the trend to services and white-collar employment.
- (3) Since an increasing variety of services are best provided in large markets, polarization in large metropolitan areas will be reinforced.
- (4) Higher incomes will permit greater mobility and therefore more choice between jobs as well as markets.
- (5) New technology of transport will make *inter-urban* access particularly easy.
- (6) Communications technology will further reinforce the cultural dominance of the cities by promoting the urban ideology throughout the nation. It will also reinforce the links between the major urban nodes, and accelerate their growth.

These all point to the central feature of the future—the *increasing potential for and preference for choice*. But because of the inherent problems of the unconstrained urban future, the potential for expanding choice will be severely limited. This applies not only to the increasingly numerous aged and socially or physically handicapped, but to the average urbanite as well. Land costs will augment the flight to the suburbs, and leisure time will be spent commuting. The greater potential for access will be eroded through escalating congestion. Higher incomes will be diminished by higher taxes and higher costs of urban goods and services.



Consider one dimension of urban choice currently being frustrated for those already well educated, relatively affluent, and with substantial leisure time. They have become increasingly concerned with the quality of urban life; the goods they buy, the activities they engage in, and the environment they prefer, all are subject to an evaluation in which *quality* is as important as *quantity*. But the urban system appears to be necessarily destructive of quality when it is left to follow its own course. It pollutes rather than cleanses; it congests rather than flows smoothly; it sprawls rather than expands in an orderly fashion; it penalizes the weakest rather than giving them preferred status; and it creates tension and violence rather than relaxation and safety.

Many of these problems are urban reflections of societal ills. But our analysis convinces us that an important dimension is uniquely urban. While we do not presume to have a cure for social problems, there are reasons for believing that the urban institutions can be reformed, that it is neither necessary nor optimal to take the urban system as given. If so, then the question is how can we begin to engage in reform, and what should be the objective of that reform? The second point is paramount: without direction, reform is pointless. The purposes and techniques of reform are more fully elaborated in the following section.

## *b) Policy Options in the Constrained Future*

### (i) EXPANDING CHOICE AS AN URBAN OBJECTIVE

Without a specific catalogue of future objectives—and no one is in a position to set these in the present—we face a severe limitation in prescribing future policy directives once we are prepared to design the future. Perhaps the optimal strategy is to devise techniques for ensuring that the urban system is continually responsive to the changing needs of urbanites, and that it maximizes the range of choice open to them. The prospects for doing this effectively appear to be quite good. The scope of future changes in the urban system are such that the *increment* in urban population over the next 30 years will be almost twice as great as the current urban population. The associated additions to the urban system in terms of housing, transport systems, infra-structure, and so forth far outweigh in scale what we now have. If to this we add the needs for replacement as a result of the obsolescence through aging of our current facilities, that proportion of the urban system in the year 2001 over which we do and shall have discretionary power is dominant. We thus have the potential to shape the urban system of the future to meet our desires.

How then can we design the urban system to be responsive to changing needs and to maximize choice? In Section C of this chapter we proposed a new institutional structure for framing relevant urban policy: a National Urban Council, an Urban Research Institute, and an Urban Planning Body. These institutions are even more important in the context of the designed future, where it is essential that urban policy should serve society's evolving needs effectively.

As we have seen, these institutional reforms are meant to achieve interest aggregation and constraint recognition. The actual delivery system requires a

clearly defined strategy, and the one we propose emerges from our preceding analysis. We have found that the unconstrained urbanization process appears incapable of providing an urban future based on expanded choice. The alternative is to control that process—to *optimize urban growth*. This, of course, leads us to reject the options spelled out in Section C *in terms of their future usefulness*. To accept that approach leads us to the conclusion that we shall have to run to stand in the same place, because ultimately, it deals only with effects, not causes; with symptoms, not sources.

The assumption, then, is that controlling urban growth can expand choice in the future. This emerges from our findings that rapid urban growth exacerbates the scarcity of land in large urban areas, and thereby distorts the housing market, the transport system, the urban public economy—indeed the whole mix of urban problems. A policy that moderates these growth impacts—that strives for a more optimal growth process—eases these pressures in the largest metropolitan areas. This arrests the degenerative process which limits choice, and it permits the accumulation of public resources to deal with the backlog of extant problems. It also provides the opportunity to plan for new, more desirable urban alternatives. We have already seen that the great limitation of all the options under the unconstrained future is that the catching-up problem—the inability to close the gap between what is and what might be—is not likely to be resolved. The approach we shall develop here provides perhaps the only realistic alternative.

## (ii) URBAN OPTIONS IN THE CONSTRAINED FUTURE

An appropriate strategy of controlling the urbanization process must be aimed at the determinants of that process. Our research has revealed that the basic determinants of urbanization are the nature of economic development and the demographic responses to such development. Economic development is an accepted goal of society. We have found that it both leads to and is supported by urbanization. Thus, urbanization can be controlled by managing economic development. But this implies that a more satisfactory rate of urbanization will require a slower pace of economic development—a condition that appears to disqualify this strategy from the outset.

The alternative is to attempt to control the demographic response to rapid development. This approach appears to have great potential for serving as the basis of a policy for the constrained future, and we shall examine two major options related to it.

Each of the two options that we consider relevant provides a technique for dealing with the question of *demographic growth*, in large units. The first option attempts to restrain the growth rate by limiting overall urban growth. The second attempts to manage urban demographic growth by rationalizing the consequent space requirements. Because the growth of cities is intricately linked to economic and demographic change, both of which are largely under federal jurisdiction, the role of the Federal Government in shaping the urban future becomes critical even under present constitutional powers. The issue here is the appropriate use of those powers rather than the acquisition of new powers.

Indeed, if successful, the overall effect may be to lessen the federal role within the cities.

### c) *Policy Option C-I: Limiting Urban Growth*

#### (i) THE STRATEGY OF GROWTH RESTRAINT

Any attempt to restrain growth is a controversial one, because it goes against some very deeply held convictions. A key source of urban demographic growth has been in-migration (Chapter 2 of this Report). By shutting off most in-migration, we can effectively slow down the rate of urban growth. This is not a difficult strategy since our immigration policy is a highly flexible one, responding at present to short-term labour requirements. Thus, the means for effectively controlling one important dimension of urban growth is already available, and it is clearly in the Federal Government's hands.

As a side-effect of this strategy, migration to the cities from backward areas within Canada will be encouraged. If it is felt that the priority objective is to eliminate regional disparities, this might well prove to be an effective scheme, although it would do nothing towards solving the urban problem. If we truly want to limit urban growth, then we shall have to engage in policies to fix the rural population: higher income support programs via unemployment insurance, higher minimum wages, or a guaranteed annual income, all would likely reduce the current high levels of internal migration by making the alternative of moving less attractive.

This urban policy option will have to be carried out in conjunction with other national policies – regional development, *immigration*, and manpower – with a clear consensus on priorities, if it is to be fully effective.

#### (ii) EVALUATION

This option is controversial because it is almost universally assumed that immigration is “good”. Two benefits are claimed: one, that rapid population growth is good; the other, that immigrants improve the quality of our labour force. The latter is true, although this benefit must be evaluated in the light of its cost (the primary one being the urban cost). The former is difficult to prove or disprove. Although Canada will be bigger in the future, current international political realities will hardly be affected by even major increases in our population size. A rapidly growing population will increase the rate of return to capital and resources, but at the expense of lowering the wage rate of Canadian labour. In addition, to the extent that the capital is foreign owned, there is a strong argument against this sort of growth. If the profits are reinvested, and if the economy grows faster, there may be a future-improvement argument, but higher rates of saving by labour (forced or otherwise) can yield equivalent rates of accumulation and growth. Other arguments for large size, such as populating an empty country, are essentially trivial in an era of metropolitan dominance.

To summarize this option, there are apparent urban advantages to lowering the rate of population growth by reducing rates of immigration and internal migration. This would conflict with other national objectives, such as growth and regional balance, and may therefore be politically unacceptable.



## d) *Policy Option C-II: The Preferred Urban Future*

### (i) AN APPROACH TO MANAGING GROWTH

The second option attempts a synthesis by preserving the benefits of growth while reducing the costs. The difficulty with the first approach is that slowing urban growth reduces benefits as well as costs (*Figure 9*). The benefits accrue from the agglomeration economies inherent in urban areas—the fact that there is maximum access to primary inputs, other firms, and final markets in dense clusters of population. The costs arise because scarce land raises a barrier to access; the direct and social costs of urbanization, which we have termed the urban problem, make access continually more difficult. Improving access within our existing urban areas ultimately has been self-defeating because it has led to more sprawl, more congestion, and so forth.

An additional disadvantage of the first approach is that it tends to condemn those not now in an urban environment to continual public assistance. It forecloses the very important option of acquiring an increasingly indispensable life style, that of urban living. It may be argued quite appropriately that current urban centres have little to offer in terms of this option; there are very few real choices to be made in our largest cities. To choose them is to choose a cluster of urban problems which are only aggravated if that choice is made. The choice is being made because the private benefits exceed the private costs. The social accounting result, which is difficult to measure, may reveal a reverse net benefit. If we accept as a national objective the right of individuals to choose where and how to live, then our present urban system makes this right not a fully realizable one; but policy option C-1 would terminate that right.

Our synthesis thus has two aims: to make that right an effective one, and to separate the urban mechanisms providing benefits from these creating costs. To achieve them we must channel further expansion in a specific way. The economic dynamic of presently large centres must not be destroyed; the labour force and markets must remain accessible. Thus, future expansion must be fully integrated into the urban system. At the same time, it must not add to the land-use problems of the large metropolitan areas. This requires the siting of new development beyond the urbanized area. These two superficially conflicting requirements—of integration yet spatial divorce—leads to only one solution: the sequential development of new communities.

A policy of new community development requires at least the following supporting programs:

- (1) limiting sprawl at the pressure points;
- (2) assisting growth where viable;
- (3) developing new communities.

Each of these is itself complex, and it is useful to trace the major steps in some detail.

#### (1) *Limiting sprawl at the pressure points*

First, the pressure points must be discovered and consent obtained from the relevant municipalities and province(s) for a cooperative pursuit of this strategy.



Techniques will be required to raise densities where this is acceptable, and to develop the other two programs concurrently so that the metropolitan area can be assured of preserving its gains while reducing the costs.

Some powerful techniques for limiting growth are now available to the Federal Government. They include assistance in the provision of services, the use of mortgages for approved land use plans, and the land assembly program (although this latter appears to be a costly procedure). With provincial and municipal planning and zoning cooperation, the strategy would be fully effective.

Densities could be increased through appropriate land uses. In-town land assembly programs under a now clearly focussed use of Section 23(c) of the NHA would assist in this, as would the more effective use of the extensive federal land holdings. Changes could also be made in lending terms to penalize under-utilization of urban land, although this might best be done under an appropriate municipal real property tax reform.

### *(2) Assisting growth where viable*

This strategy would be aimed at building on urban infra-structure already in place in relatively small areas closely linked to the main urban system. Policies would be required which would avoid increasing the costs of urbanization and would better link these areas into the metropolitan system without adding to metropolitan problems. Of necessity, most of these steps would be provincial and local, but the co-ordinated provision of housing under the NHA and assistance for transit in particular, as well as the location of new federal buildings, could lead to a more positive federal role in these communities.

### *(3) Developing new communities*

The main element of this option is the development of fully planned new communities themselves. To meet our twin objectives of integration with spatial divorce these communities will have to be connected to the metropolitan system by new, high-speed mass transit systems. Concurrent policies will be required that ensure that the automobile will provide no realistic alternative. This will break the links connecting greater distance, more cars, more congestion, more core pollution, more wasted core space, and so on; and it will also ensure high rates of transit utilization and an end to the vicious circle of transit subsidy, fare increase, and passenger decline.

In the new communities, public acquisition of land will yield to the public authorities all incremental land values. Pre-planning can reserve rights of way for infra-structure, provide enormous economies of on-site factories for construction of utilities, structures, and roadways, as well as housing. Even such innovations as central heating (nuclear ?) and cooling systems can be attempted, reducing pollution and providing low-cost services.

The concept is not new, although the program when applied elsewhere has been generally limited as a result of the failure to integrate it into the full urban system and its dynamic processes. The one attempt that comes closest to our concept has been the Vallingby-Stockholm model.<sup>17</sup> The linearity of the Canadian urban system would seem to make it extremely relevant.

<sup>17</sup> See Research Monograph No. 6.

These new communities are not to be conceived of as pure dormitory towns, or as completely new cities. The latter is unrealistic because it fails to account for the interdependencies of the urban system.<sup>18</sup> As for the former, our interest in national economic development would permit us to program it so that these new communities could attract more and more economic activity. Ultimately, because of growing and efficient markets and inputs, they would become full-fledged, mature components of the national urban system, with flows moving between them and the metropolitan area in both directions, and indeed, with sophisticated linkages to all urban centres.

The actual location of such communities must also be guided by our concept of the urban macro-system. Since flows between metropolitan areas are predominant, new communities should be located on the primary arteries,<sup>19</sup> so that inter-urban access will be improved, improving thereby the overall efficiency of the urban system and providing new community dwellers with an additional choice—improved access to other metropolitan areas.

We have already given some general ideas on what we have in mind for this particular program. It is more complex than the other options because it is entirely new. Stress at the outset will have to be laid on the program development side. This will require the development of a comprehensive planning process, and the recruitment of a top-flight management team. One prototype of the relevant kind of system required is contained on a smaller scale in the Descon-Concordia brief to the United States Department of Housing and Urban Development.

#### (ii) AN EVALUATION OF THE PREFERRED OPTION

The idea that new communities can provide a fundamental long-term solution to the urban problem raises a number of issues that should be noted at this point.

##### *The national urban policy context*

What we have prescribed above is ultimately more than a federal urban policy; it is a *national urban policy*. The principal objective is to allocate national urban growth in an optimal manner. On the basis of our research, we have suggested what we judge this strategy to be: basically a new communities program with associated programs to deal with the extant urban system. When the national organizations are in place, these findings may well be amended as a new national consensus is formed, and as further research findings reveal new mechanisms shaping the urban system.

But our findings will remain relevant with regard to the federal interest in urban policy. *We stress this dichotomy between national and federal urban policy*. The national policy is an aggregation of the policy interests of all concerned, ultimately through an institution such as the National Urban Council. Each participant in the Council will quite naturally bring his own perspective

<sup>18</sup> New cities are a valid solution if large metropolitan economies are encountering diseconomies of scale, but they are second best to our new communities approach. Kenneth J. Arrow, "Criteria, Institutions and Function in Urban Development Decisions", in Anthony H. Pascal, ed., *Contributions to the Analysis of Urban Problems*, *op. cit.*

<sup>19</sup> See Research Monograph No. 3 for a discussion of inter-urban corridors and Research Monograph No. 6 for renewed U.S. interest in this concept.

on the urban situation to the fore. It is important that the Federal Government have a perspective, because of its role with regard to economic development, internal and international mobility, and regional disparities. The national dimension of the urban system makes such a federal policy essential, particularly if we sincerely intend to design the future.

The specific federal role would be highly aggregative in the preferred option. It would seek to encourage *appropriate* demographic flows and industrial location (by appropriate, we mean most relevant for the broad plans for development of the urban system). It would also serve as the prime motivator of these programs, and of course of the development of the appropriate institutional framework. In addition, inter-urban linkages, particularly those entailing new technology, would be of federal interest. The siting of federal activities, and of other activities influenced by federal decision making, would be a further element in the policy arsenal.

This concentration on largely macro issues would leave even more scope for junior levels of government. Because the developmental problems would be modified, the extant problems in cities would be more manageable. The provincial role in any program of new communities would be augmented as well, since the planning function, indeed the whole municipal sphere, would come under its jurisdiction.

Clearly, none of these roles will be effective in the absence of a consensual national urban policy. With such a policy, the prospects that each level of government will solve its problems are improved, because the policies of the other levels of government are supportive rather than combative.

### *Constitutional issues*

Inevitably, any urban policy, including that of new communities, runs headlong into a constitutional debate. The problem is that without federal action, no developments along these lines are likely to be forthcoming. Metropolitan areas are extremely short on resources, and provincial governments cannot be expected to take the kind of national view that will lead to the initiation of such a policy. It is a highly innovative and therefore risky program, and the Federal Government is best able to spread and absorb the risk.

Some of these latter factors do, however, provide the constitutional basis for a federal initiative. Since the first community will be the most difficult to create in terms of uncertainties, errors, and initial outlays, it would be legitimate to view it as a purely experimental program. If it is a successful solution to the urban problem, we would expect subsequent new community development to be modelled after it and initiated by the various provincial governments in conjunction with the National Urban Council acting in their now demonstrated self-interest.

This experimental nature of the first new community would permit the Federal Government to adopt a highly flexible posture towards the appropriate organizational apparatus. A development corporation along the lines of the



Expo corporation could be formed. The directorship could consist of several federal ministers, provincial ministers, and metropolitan representatives, together with developers, financiers, and so on. The actual working agencies could co-opt personnel from all levels of government, industry, and universities, again avoiding an exclusively federal role. Financing could be arranged on a loan basis since land sales would generate substantial returns.

It is probably true that even this level of involvement might appear as an invasion of provincial rights. If our arguments are valid

- that the urban system is a spatial dimension of the national economy, and that economic development will cause and depend upon sound urbanization
  - that because of this the urban system is linked nationally in terms of commodity flows, population movements, information links, and so on
  - that these linkages serve to transmit the costs and benefits of urban growth through the nation
  - that managing the growth of the major units can have profound benefits for the nation
  - that all Canadians stand to benefit from managed growth in terms of a greater ability to choose desired life styles
- if these points are accepted, then it is clear that there is room for a federal role in urban policy because of this national dimension to the urban system. The preferred option requires no new spending or legislative power, but only a direction of present powers to a clearly articulated, commonly accepted, extremely promising end.

### *Other urban demands*

It is to be expected that many cities and several provinces not likely to benefit directly will feel threatened by this selective stress on metropolitan areas. A program of education will be necessary regarding the nature of the urban system, and hence the self-interest of such units in this scheme. For example, the awareness of the impact of inflation in Ontario (primarily in Toronto) on the rest of the urban and indeed national economy could make this task less difficult.

Further, other provinces with similar urban problems probably will be encouraged to begin devising appropriate urban policies. The demonstration effect of the program, that there are ways of coping and that global approaches are required, will probably be its most significant positive result. The potentially important role of the National Urban Council in providing a forum for hearing and adjudicating in cases of conflict is self-evident.

Smaller communities will no doubt feel that this program will direct growth from them as well. Those with growth prospects, however, will necessarily be closely linked to the urban system and will benefit directly from the program.



Indeed, some may well form component parts of the new communities eventually. Others may see no benefits. But most face problems that have different sources, such as regional retardation, and solutions for them are best developed elsewhere.

### *The scale of the program*

We have noted, in Chapter 3 of this Report, that the *increase* in metropolitan population will amount to somewhere between 10 million (SRG) and 16 million by 2001. Much of this (one-half) will take place in the major metropolitan centres of Montreal and Toronto. Consequently, our policy must be geared primarily towards solving the problems of these centres. If we are to stabilize the growth of their respective populations, some six to seven million persons will have to be accommodated in the Montreal-Toronto corridor over the next 30 years. A good proportion can be accommodated in the rapidly growing communities presently in the corridor, particularly if these are well conceived. But several million at least will require the facilities that our new communities can best provide. Let us assume a minimum of two and one-half million, to be domiciled in three new communities of about 800,000 each. To achieve this size, each community must grow by about 120,000 in the first decade, and double the rate of increase (7% per year) every decade thereafter. The initial rate of increase of 12,000 per year, on the average, is feasible. Toronto grows by six or seven times this amount every year, but that growth is essentially unplanned. Our new program will require a huge planning effort on a scale not ever undertaken before. We believe this is not a serious constraint.

### *Conclusions*

The preferred policy has a real potential for dealing with the urban future in a way that promises not only to reflect society's emerging desires and expanding choices, but also to provide the capacity to solve our extant problems. The freeing of resources, and the diversion of local attention from continually meeting future problems to dealing with those we already face, are inherent in this approach. Indeed, the federal policy options we have presented for meeting new problems of the unconstrained future would be available to help eliminate the backlog of urban problems—a task which *does* offer some real prospects for success.

The political merits of this approach are substantial. It attempts to deal with the broad urban condition, a condition affecting all urbanites. Alternative approaches that limit their focus to specific problem areas have much narrower constituencies, and mobilizing the necessary political support will prove to be extremely difficult, if at all possible.<sup>20</sup> The fact that this approach is directed to all urban Canadians makes it truly a national one, for it will shortly involve almost all Canadians. Our general conclusion, therefore, is that this particular policy is indeed a preferred one in terms of providing viable long-term solutions to our urban problems.

<sup>20</sup> Edward C. Banfield, "Why Government Cannot Solve the Urban Problem", *Daedalus*, Fall 1968.

### e) *Summary and Conclusions*

Conventional urban policy has a limited potential for dealing with our present and future urban problems. Our perspective has been fragmented in terms of both the understanding of urban problems and the approaches to dealing with them. The techniques for dealing with the latter require substantial institutional innovations that will coalesce the diverse and conflicting actions into a national urban policy.

What the content of this policy is will depend on the level at which we finally choose to conceptualize these problems. We have presented two broad alternatives. The first accepts the urban system and seeks to improve the required weaponry. The second seeks to choose its own battlefield. It attempts to build a better system by recognizing the complexity and the interdependence of the component parts. The choice between these alternatives will ultimately depend on one's assessment of the merits of our approach and one's attitude to the future. We regret that our case for the former was less than conclusive: the time constraints, the state of the art, and our own limitations have hampered us. For the latter, we assume no responsibility.









